

Gianfrancesco Pico Della Mirandola (1469-1533) and His Critique of Aristotle

Charles B. Schmitt

XXIII

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FOR KATE

PREFACE

The origins of this book go back to 1956 when it was suggested to me that a study on the philosophy of Gianfrancesco Pico della Mirandola would furnish an important addition to our knowledge of the philosophy of the Italian Renaissance. It was not, however, until 1960 that I could devote a significant portion of my time to a realization of this goal. My work was essentially completed in 1963, at which time it was presented in its original form as a doctoral dissertation in the Philosophy Department of Columbia University. Since then I have made many minor improvements and several chapters have been extensively reworked.

This study represents the first attempt in fifty years to give a detailed account of even a portion of Gianfrancesco Pico's life and thought. The most comprehensive previous study, Gertrude Bramlette Richards, "Gianfrancesco Pico della Mirandola" (Cornell University Dissertation, 1915), which I have found very useful in preparing my own book, is largely based on secondary literature and is mistaken in a number of details. Furthermore, Miss Richards' treatment of Gianfrancesco Pico as a thinker is very sketchy and is not an exhaustive study of his own writings. It is hoped that my present study, built in part on her extensive bibliographical indications, brings forth a certain amount of new information which will be of value for further research.

In the course of my research on Gianfrancesco Pico I have incurred numerous debts which it is now my pleasant duty to acknowledge. It is hoped that the end result is worthy of the inconvenience which it has caused so many people. The opportunity to consult many of the manuscripts and rare editions, as well as the opportunity to devote my undivided attention to this study for two full years, would hardly have been possible without generous grants from the United States Government for study in Italy during the years 1961-63. Especially am I

grateful to Miss Cipriana Scelba and her staff of the Commissione Americana per gli Scambi Culturali con l'Italia for contributing in so many ways to making my stay in Italy both pleasant and fruitful. I would also like to thank Fordham University for making a grant available to me for aid in defraying the cost of the final preparation of the manuscript.

The libraries and archives in which the research for this book was carried out have in almost every case proved to be most helpful in providing the necessary materials. Special mention is due those two great establishments where by far the larger part of research was carried out: The Columbia University Libraries (with particular mention of the staff of Special Collections) and the Biblioteca Nazionale Centrale of Florence (especially the staff of the "Sala di Consultazione" and the "Sala del Rinascimento"). The other libraries in which I have worked for periods of time varying from less than an hour to more than a month are many, but I feel that each should be given the proper credit. In the United States, I wish to thank the Boston Public Library; the Harvard University Libraries and the Andover Theological Seminary Library of Cambridge; the Yale University Library of New Haven; the Union Theological Seminary Library, the New York Public Library, the Pierpont Morgan Library, and the New York Academy of Medicine Library, all of New York; the Princeton University Library; and the University of Chicago Library and the Newberry Library of Chicago. Among the many Italian libraries which I used the following must be remembered: the Biblioteca Comunale and the Biblioteca Universitaria in Bologna; the Biblioteca Comunale in Carpi; the Biblioteca Comunale in Ferrara; the Archivio di Stato, the Biblioteca Marucelliana, the Biblioteca Medicea Laurenziana, the Biblioteca Riccardiana, the Biblioteca della Facoltà di Lettere e Filosofia, the Library of the Kunsthistorisches Institut, and the Library of the Harvard University Center for Renaissance Studies (Villa I Tatti) in Florence; the Biblioteca Governativa in Lucca; the Archivio di Stato, and the Biblioteca Comunale in Mantua; the Biblioteca Ambrosiana, the Biblioteca Nazionale Braidense, and the Biblioteca Trivulziana in Milan; the Biblioteca Comunale in Mirandola; the Archivio di Stato, the Biblioteca Estense, and the Biblioteca Universitaria in Modena; the Biblioteca Antoniana, the Biblioteca Comunale, the Biblioteca del Seminario, and the Biblioteca Universitaria in Padua; the Biblioteca Palatina in Parma; the Biblioteca Comunale in Perugia; the Biblioteca Angelica, the Biblioteca Nazionale Centrale Vittorio Emanuele II, the Biblio-

teca Vallicelliana, and the Biblioteca del Convento di Santa Sabina in Rome; the Biblioteca Comunale in Siena; the Biblioteca Nazionale Marciana in Venice; and the Biblioteca Bertoliana in Vicenza. The courteous and efficient staff and the incomparable collection of the Biblioteca Apostolica Vaticana made my task much easier in many ways. The other European libraries of which I made use and to which I must render thanks include: the Bodleian Library at Oxford and the British Museum Library in London; the Bibliothèque Royale in Brussels; the Bibliothèque Nationale and the Bibliothèque Mazarine in Paris; the Stadtbibliothek in Nuremberg, the Bayrische Staatsbibliothek and Universitätsbibliothek in Munich; and the Oesterreichische Nationalbibliothek in Vienna; and the Biblioteca Nacional in Madrid, the Biblioteca del Escorial, and the Biblioteca Universitaria in Barcelona. I would also like to thank the following libraries (in addition to some of the above) for providing me with photographic reproductions of materials in their possession: the Cornell University Library, the Folger Shakespeare Library of Washington, D.C., the University of Illinois Library, and the Biblioteca Casanatense in Rome.

Of those persons who aided me in the preparation of this study I should like to thank above all Professor Paul Oskar Kristeller of Columbia University, who first suggested that I undertake this study and whose patient and knowing help at all stages of the work has been as generous as it had been illuminating. Thanks are also due to Professors Joseph Blau, Arthur Hyman, Joseph A. Mazzeo, John C. Nelson, and John Herman Randall, Jr., all of Columbia University, for many helpful suggestions. Especial thanks must go to Professor Sears R. Jayne of Queens College of the City University of New York and Professor Neal Ward Gilbert of the University of California (Davis) for having read the entire manuscript with care and thereby making many improvements – both stylistic and factual – on an earlier draft. Professor Edward P. Mahoney of Duke University has offered many helpful suggestions for the improvement of the manuscript and our many long discussions – both in Italy and in New York – of the Renaissance philosophy, have increased immeasurably my own understanding of the whole period. Dr. C. H. Clough's careful reading of Chapter I has saved me from several serious errors and several of his suggestions have resulted in major improvements. Professor Paul F. Cranefield of Rockefeller University and Professor Joseph I. Budnick of Fordham University have made helpful suggestions regarding the technical aspects of medicine and physics in so far as they touch my

book. Professor Robert C. Fox of St. Francis College (Brooklyn), Professor Richard Goldthwaite of Kent State University, Professor Paul Grendler of the University of Toronto, Professor Jerrold Seigel of Princeton University, and Professor Donald Weinstein of Rutgers University have all read parts of the present study and have given me suggestions which have made it better than it otherwise would have been. To Mr. Herbert Matsen of Converse College I am indebted for many helpful aids, both regarding the techniques of scholarly research in the Renaissance period and regarding practical hints for fruitful study in Italy. Professor Richard Popkin of the University of California (San Diego) gave me several useful indications on the study of early modern scepticism. The members of that learned assembly, the Columbia University Seminar in the Renaissance, patiently heard me read a portion of one chapter and their ensuing discussions clarified several important points. Mr. Philip Weimerskirch of the Columbia-Presbyterian Medical Library has called to my attention more than once to items of bibliographical importance which otherwise might have escaped my notice. Professor Renzo Amedeo of Garesio, Reverend Thomas Kaeppli, O.P. of the Convento di Santa Sabina in Rome, Professor Eugenio Massa of the University of Pisa, and Professor Alessandro Perosa of the University of Florence helped to make my stay in Italy more fruitful by aiding my studies in various ways. To my friends at Mirandola, the late Giovanni Cavicchioli and Dott. Arrigo Marazzi, I am indebted for several kindnesses and I can only hope that this book in some way recalls the past glory of that *città antica e nobilissima*. To Miss Eva Hoenig of New York, who has twice typed this difficult manuscript, I tender my sincerest thanks; the inconveniences that she had to undergo to meet various deadlines few will know. Finally, to my wife Catherine, who bore our son in a then unfamiliar country and who had to undergo many hardships for the sake of this study, I offer my gratitude which must of necessity fall short of what which is due her.

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LIST OF ABBREVIATIONS

Opera	<i>Ioannis Francisci Pici Mirandulae . . . opera quae extant omnia . . .</i> (Basel, 1601).
Cron An	<i>Cronaca della nobilissima famiglia Pico scritta da autore anonimo, Memorie storiche della città e dell'antico ducato della Mirandola</i> , II (1874).
Papazzoni	<i>Cronaca della Mirandola dei figli di Manfredi e della corte di Quarantola scritta da Ingrano Bratti continuata da Battista Papazzoni, Memorie storiche . . . della Mirandola</i> , I (1872).
Papotti	<i>Annali o memorie storiche della Mirandola raccolte dal P. Francesco Ignazio Papotti M. O. con note critico-illustrative, Memorie storiche . . . della Mirandola</i> , III (1876).
Sanuto	<i>I diarii di Marino Sanuto</i> , ed. G. Berchet et al. (Venice, 1879-1903).
Cron Mod I	<i>Cronaca modenese di Jacopino de' Bianchi detto de' Lancellotti, Monumenti di storia patria delle provincie modenesi</i> (Parma, 1862).
Cron Mod II	<i>Cronaca modenese di Tommasino de' Bianchi detto de' Lancellotti, Monumenti di storia patria delle provincie modenesi</i> (Parma, 1862 f.).
Ceretti BP	<i>Biografie pichensi, Memorie storiche . . . della Mirandola</i> , XVII-XX (1907-13).
Ceretti BME	Felice Ceretti, "Bianca Maria d'Este," <i>Atti e memorie della RR. deputazioni di storia patria per le provincie dell' Emilia</i> , new series, vol. III, part I (1878), pp. 119-67.
Ceretti AMP	Felice Ceretti, "Anton Maria Pico della Mirandola," <i>Atti e memorie . . . per le provincie modenesi e parmensi</i> , new series, vol. III, part II (1878), pp. 237-87.
Ceretti FT	Felice Ceretti, "Francesca Trivulzio," <i>Atti e memorie . . . per le provincie dell' Emilia</i> , new series, vol. V, part II, (1880), pp. 103-76.

- Ceretti LP Felice Ceretti, "Lodovico I Pico," *Atti e memorie . . . per le provincie dell' Emilia*, new series, vol. VII, part II (1882), pp. 93-198.
- Ceretti GIIP Felice Ceretti, "Galeotto II Pico," *Atti e memorie . . . per le provincie modenesi e parmensi*, series III, vol. I, part II (1883), pp. 225-330.
- Ceretti GIP Felice Ceretti, "Galeotto I Pico," *Atti e memorie . . . per le provincie modenesi e parmensi*, series III, vol. II, part I (1884), pp. 70-101.
- Ceretti LI Felice Ceretti, "Lettere inedite del conte Giovanni Francesco II Pico," *Atti e memorie . . . per le provincie modenesi*, series V, vol. III (1904), pp. 123-39.

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INTRODUCTION

I

The Renaissance was a many-faceted occurrence. All attempts to reach a definitive characterization of it seem to have fallen short in some way. Part of the difficulty lies in the fact that there does not seem to be an identifiable unity which runs throughout the period. Certain styles may characterize Renaissance painting, architecture, or literature, but usually the unifying themes actually found there are limited to the output of a small portion of the whole spatial-temporal limits of the age. While the artistic and literary products of the Renaissance have received a good deal of attention from various scholars and interpreters, philosophy has not been so fortunate, having been studied only in a limited way and mostly during the past thirty years. Consequently, we are not yet in a position to evaluate the philosophical contributions of the Renaissance period as a whole, although several attempts, based on the evidence now available, have been made to state some of the various dominant trends. We are now at the point when we should devote ourselves to discovering and printing unpublished texts, to establishing critical editions of the important philosophical writings of the age, and to writing monographs on individual thinkers and on specific philosophical problems and traditions which mark the epoch. Vague general histories and interpretive essays based upon secondary works and upon traditional evaluations can do little or nothing to increase our knowledge and understanding of the unique philosophical significance of the period.

In the present study, which focuses on one philosophical thinker of the sixteenth century, I hope to be able to add something to our detailed knowledge of the Renaissance. The subject of this monograph, Gianfrancesco Pico della Mirandola (1469-1533), has not yet been

carefully evaluated as a philosopher, nor have either the biographical facts of his life or the bibliographical basis for a study of his thought been hitherto established. I can only hope that my work both sets down a solid foundation for later studies on Gianfrancesco Pico and that it helps to clarify certain previously misunderstood tendencies of sixteenth century thought. I should like to point out especially how Pico brought some original ideas to the philosophical discussions of his century and how he fits into the general intellectual context of his time.

II

We are, of course, forced to see Gianfrancesco in relation to his famous uncle, Giovanni Pico, one of the key figures of Quattrocento philosophy. Both Picos were from the same ruling family of the small duchy of Mirandola situated in the midst of the rich farmland of the Po Basin. Both had extraordinary interests in learning and philosophy, as well as in literature and theology. The two also had many friends in common, spread throughout the varied fields of intellectual endeavor. Gianfrancesco Pico was only six years younger than his uncle, but was indebted to the latter to a remarkable degree, apparently inheriting from Giovanni the inordinate desire to absorb as many of the intellectual currents of the Renaissance as he could.

It is perhaps this close relationship between the two Picos which has led many later writers to make the initial – and satisfyingly simple – assumption that Gianfrancesco Pico was merely a follower of the Neoplatonically oriented syncretism of his uncle. Other historians, commentators, and critics have committed the less pardonable fault of confusing the two men. Such a confusion is a fate which all who are born into a family of a famous man are susceptible, and there can be no doubt that Giovanni Pico della Mirandola was a famous man in Quattrocento Italy and has remained one down to the present day. Although there are certainly similarities in the philosophical and religious outlooks of the two Picos, there are also very definite differences in the opinions which they expressed in the course of their lives. Indeed, regarding certain issues the two were poles apart, although a good case can be made that Gianfrancesco's philosophical writings bear a strong similarity to his uncle's later writings. On the other hand, Gianfrancesco's *Examen Vanitatis* is of a completely different orientation than Giovanni's most characteristic works such as the *Oratio* or the *Apologia*. The nephew, after coming under Savonarola's overpowering influence

early in his career, never escaped the friar's intellectual domination. The *Examen Vanitatis* bears eloquent testimony to this. Gianfrancesco makes no attempt to establish the *pax philosophica* proposed by his uncle, perhaps with the exuberance of youth, but also with a certain maturity of purpose; rather, his endeavor in the *Examen Vanitatis* is to show that philosophy in general is mistaken. Whereas Giovanni Pico had often argued that all philosophies and all religions have attained a portion of the truth, Gianfrancesco said, in effect, that all religions and all philosophies – save the Christian religion alone – are mere collections of confused and internally inconsistent falsehoods. In holding such a view, he sided not only with Savonarola, but with certain of the Fathers and with the Reformers as well. On this point, he was insistent. Christianity is a self-subsistent reality and it has little if anything to gain from philosophy, the sciences and the arts. This central thesis diffuses itself through nearly the whole of Gianfrancesco's literary output. He writes not to praise or extend the realm of philosophy but to demolish it. Aristotle, "maestro di color che sanno," receives the brunt of Pico's attack, and the Mirandolan argues that such knowledge as Aristotelian philosophy affords avails us little in our major quest for sanctity and salvation. In maintaining such an opinion Gianfrancesco did not differ markedly from several theologians, mystics, and humanists contemporary with him. What sets him off as more interesting than the others to historians of philosophy, of science, of religion is that he entered into the arena of philosophical dispute and met the Aristotelians on their own terms. Although Pico resorts to religious and theological arguments time and again to refute Aristotle and the profane science which he represented, this was not done before he had countered the Aristotelian positions with specifically philosophical arguments, often of an original or highly unusual nature.

III

Gianfrancesco Pico's judgment of the value of Peripatetic philosophy seems to have changed in the course of his life. Although we have no evidence that he was ever an enthusiastic Aristotelian, an early work like his *De imaginatione* clearly indicates that as a young man he had a healthy respect and perhaps even admiration for the Stagirite. Eventually all of this changed, however, so that by the time the *Examen Vanitatis* was published in 1520, Pico had little but scorn for Aristotle. It is to this later treatise, the most extensive and mature philosophical

work we have from Pico's pen, that we shall direct our attention in the present study.

Pico's criticisms of Aristotelianism involve three major points: (1) a critical philological and textual analysis of the *corpus Aristotelicum*, (2) a searching and exhaustive critique of Aristotle's method of scientific demonstration, and (3) a criticism of certain key Aristotelian doctrines of natural philosophy. In each of these three areas of discussion Pico takes his point of departure from different earlier critics of Aristotle and approaches the Aristotelian doctrines themselves from a variety of critical viewpoints. Each individual criticism offers us adequate reasons to re-evaluate the evidence in favor of Aristotelian philosophy.

His textual criticism of the *corpus Aristotelicum* indicates that Gianfrancesco was conversant with the techniques of literary humanism which had been developed in the previous century and a half. He uses these philological tools as keen instruments to dissect the writings attributed to Aristotle. The conclusions which he reaches are clear, and in many ways they foreshadow those obtained by Francesco Patrizi more than a half century later in his *Discussiones peripateticae*. Humanist philology, combined with an initial doubt regarding the validity of the Peripatetic system, produces perhaps the expected result. Careful scrutiny of the philological and historical evidence at hand induces Gianfrancesco Pico to conclude that the writings which have come down to us under the name of Aristotle are not what they claim to be. Insisting that what passes for Aristotle's works is largely made up of forgeries and later interpolations, Gianfrancesco contends that we cannot rely on such a confused mass of contradictory statements to establish the true and valid science which Aristotelians claim that their master has given us. Such a philosophy cannot be a handmaid to Christian theology, but must be held in abhorrence, Pico argues. Although we may still possess some of the genuine works of Aristotle we have no criterion by which to separate these from the forgeries, interpolations, and corruptions with which they have become adulterated during the long centuries of the tradition.

Gianfrancesco's searching analysis of Aristotelian epistemology is probably from a philosophical point of view his most significant contribution. Cast within the framework of the important methodological discussions of the early sixteenth century, Pico's critique raises a number of questions of far-reaching importance. Randall, Gilbert, and others have indicated just how fruitful the Renaissance discussions of method were on the course of later philosophy and science. In Gian-

francesco Pico we have a hitherto unstudied element of these controversies. Pico, *christianissimus* and anti-Aristotelian, utilizes the sceptical arguments from antiquity to combat the Aristotelian sense-based epistemology and the *scientia* derived from it. Pico's sceptical critique, calling into question some of the most time-honored of Aristotelian principles, points the way to the complete re-evaluation of scientific and philosophical methodology of the next century. Gianfrancesco himself was quite content to cut away in the name of Christianity whatever reliability Aristotelian philosophy might have had. He was furthermore satisfied that once "science" – Aristotelian or otherwise – had been demolished, it would not arise again like the Phoenix or the Hegelian *Aufhebung*, based on a different set of principles and with different objectives. In this he was mistaken, for a new science – or rather new sciences – replaced the old one, often having as a starting point some of the very objections which Pico had raised against Aristotelian *scientia*. Of course Pico himself could not have found the "New Science" any more satisfactory than Aristotle's. On the grounds of battle set forth by Pico, no science could be satisfactory, for none of them could offer the degree of certitude which he required. He set such a high standard for *scientia*, absolute certitude, that no knowledge other than that given us directly by God could ever form an acceptable basis. Probable knowledge is no knowledge at all, as far as he was concerned. Scripture is the one reliable source of truth; to look to Aristotle for certainty is foolhardy. Aristotelian science cannot rise above probability, for it is entirely grounded in sense knowledge and as such cannot overcome the mutable, deceptive, ever-changing character of the material world. Moreover, man himself, victim of a fallen nature, does not have as his own a fully reliable criterion by which to judge what is true and what is false. On these matters only the word of Scripture is to be trusted.

The doctrines resulting from Aristotle's mistaken and fallacious approach to knowledge fill his works as the fruit of such misguided endeavor. Although after Gianfrancesco's critical attack on Aristotle's theory of knowledge and methodology further criticism of individual doctrines might almost be called superfluous, he, nevertheless, does question other tenets of Peripatetic philosophy. Of his objections, particularly noteworthy are those regarding several key doctrines of natural philosophy; Pico rejects four of Aristotle's most fundamental teachings – those regarding motion, time, place, and vacuum. Although the Mirandolan does not show himself to be a brilliant scientist, fore-

runner of Galileo in the strict sense, he does present several criticisms from earlier writers which did eventually have an important role to play in the overthrow of the Aristotelian world view at the end of the sixteenth and beginning of the seventeenth centuries. Pico brought to the fore the very serious and very astute arguments of two yet unheralded critics of Aristotle, John Philoponus and Hasdai Crescas. If Pico himself cannot claim much originality on this point, he can at least be credited with having selected several of the more significant suggestions which had been proposed as alternatives to some of the more dubious teachings of Aristotelian natural philosophy. In fact, the full impact of Philoponus' and Crescas' contributions were not recognized until several generations after Pico's reintroduction of their teachings. Consequently, perhaps without a full realization of what he was doing, he anticipated in some measure the direction of later sixteenth century discussions of natural philosophy.

IV

In Pico's rejection of Aristotle and the basic tenets of his philosophy we can see the emergence of several significant tendencies which came more and more to characterize later philosophy and science. Some of these are brought out in the body of the monograph. Of one in particular, however, I would like to make mention here. Running through the whole of Gianfrancesco's critique is the implication – sometimes tacit, sometimes expressly stated – that general laws are invalid unless they are true of all of the instances which they claim to cover. This is merely one of the critical doctrines which he learned from the study of Sextus Empiricus' sceptical writings and which he applied with great vigor especially to the principles of Aristotelianism. Pico envisioned that his use of various sceptical tropes (or modes) to question Peripatetic principles would have a no more significant consequence than securing the downfall of Aristotelianism as a philosophy. In his view the destruction of the validity of the general laws of philosophy and science could have only the effect of inducing his contemporaries and successors to withdraw their confidence in Aristotelianism and to place it rather in the undemonstrated, yet unquestionable, truths of Christian Scripture. Pico saw scepticism as a service to Christianity; it could serve the function of destroying the claims of dogmatic philosophers, thereby allowing Christian doctrine to become recognized as the one valid

source of knowledge. Understanding for him, as for Augustine, came through faith and not through reason.

The workings of history, however, are sometimes rather strange. The results of Pico's method ultimately proved to be much more fruitful in ways which he apparently had not anticipated. Whereas for him the uncertainty of the general principles of dogmatic philosophy foreshadowed the downfall of philosophy in general, for others it indicated the necessity of re-evaluating the principles themselves. From this ensued a new and more careful examination of natural phenomena and a fresh attempt to reinterpret the data in terms of revised post-Aristotelian principles or laws. In short, the questions which Pico raised regarding the validity of the then-accepted principles of Peripatetic philosophy were reformulated by others in what ultimately proved to be a much more advantageous way. One example of such an attempt was that of Pierre Gassendi, whose starting point in his critique of Aristotelian science derived directly from the *Examen Vanitatis*. Telesio, Bruno, Galileo, and others also employed the same arguments which Pico had brought to the consciousness of Renaissance Europe. Gianfrancesco Pico's sceptical techniques did not die with him, but lived on to produce a tangible, recognizable influence on the intellectual *ambiance* of early modern Europe. The scepticism, which in the *Examen Vanitatis* was wholly destructive, became in later centuries largely constructive. Besides doubts, uncertainties, and "suspension of judgment," scepticism can also occasion a calculus of probabilities, a spirit of careful, determinate observation, and a healthy sense of checking all information at the source from which it derives. As well as producing the "lost soul" with not a straw to grasp, scepticism might provide an immediate way to tie theory to reality and to make "laws" reflect the true nature of the individual events which they seek to summarize.

V

The philosophical issue of scepticism in the context in which Pico brought it to our attention raises a whole series of significant questions. The use which Pico made of sceptical arguments might appear somewhat startling to those who tend to identify scepticism with the anti-religious. The sceptic can certainly be one who entertains religious doubts or disbelief, but as Pico's writings indicate so well, scepticism can also be used in the service of religion. In fact, a careful examination of the reintroduction of scepticism into the West during the sixteenth

century discloses that it was used far more often in behalf of Christianity than in opposition to it. Gentian Hervet's Preface to his translation of Sextus Empiricus (1569) clearly indicates that he was of one mind with Pico on this point. Moreover, Giulio Castellani's attack on Pico's scepticism (1558) is in Aristotle's defense rather than Christianity's. Justin, Tertullian, Augustine, Bernard, Nicholas of Cusa, and many others have attacked dogmatic philosophy in the name of Christianity. It was only the nineteenth century Church which condemned Pico's position as "fideism" under the rather strained circumstances of competing nationalistic and ideological interests at the Papacy. Pico was in good company in his own time; it remained for a later century to condemn his approach to the faith-reason problem. While it is true that Pico's own views were generally closer to those of the Reformers than they were to the formulations of the Council of Trent, this does not seem to prove anything in particular about his orthodoxy. The same might be said of Cardinal Cusanus or Erasmus. In a period of history in which increasingly emphasis was being placed both on reason and on the importance of natural knowledge, Pico's – as well as Savonarola's and Luther's – insistence that religion must be based on *fides* rather than *ratio* is understandable. A like situation arose in the nineteenth century with Kierkegaard coming on the heels of Hegel, and Bautain and Bonnetty, Catholic fideists, reacting against the rationalized theology being taught in the seminaries.

It is now beginning to be realized, although the process has been painfully slow, that we cannot make a simple equation between scepticism and irreligion. Regardless of the fact that there was a pronounced tendency in many of the seventeenth and eighteenth century thinkers to do this, such a connection was almost completely absent in the fifteenth and sixteenth century "sceptics." Pico is but one example of a Christian who utilized sceptical arguments to defend his faith. He is a most important example, however, for he carried his scepticism further than did most of his contemporaries. Moreover, he imbibed Pyrrhonic doctrine from its source, something that probably cannot be said for any other Christian before 1560. Scepticism can be used in defense of Christianity. Why not? St. Paul certainly offers a good precedent for doubting the quibblings of the various dogmatic schools. Scepticism and agnosticism or atheism may be conjoined in a single philosophy, but not necessarily. The uses to which Hume put scepticism must not be allowed to obscure the very real fact that it often functioned in a much different way in the sixteenth century. Scepticism *per se* is

neither religious nor anti-religious, but it may be either. The *Examen Vanitatis* shows us unequivocally that it can be used in the service of Christianity; the praise that was given the work by later writers indicates further that Pico was not alone in this opinion.

We have been given a variety of epithets to characterize the various combinations of interests in early modern philosophy. One speaks of "Christian humanism," "Christian philosophy," "the Christian Renaissance." Could we not with as much justification speak of Gianfrancesco Pico and others as "Christian sceptics"?

Pico, on the other hand, was not entirely typical of his age; no man is. In a sense he was "out of joint" with the Renaissance – at least with many interpretations of the Renaissance which have gained wide popular acceptance. He was a humanist, but not quite a Platonist, and certainly he did not write paeans on the abilities of man. He was a staunch Catholic, yet wholly unfriendly to Aristotle. He was closely tied to the Papacy, dedicated works to four pontiffs, rode into battle with the popes against their enemies, but wrote two works so critical of the organization and abuses of the Church that they are well-worthy of a Luther. In another sense, he was a typical representative of the Renaissance. He "revived" the teachings of two ancient authors (Sextus Empiricus and John Philoponus), who were practically unknown at his time. He knew Greek well and applied all of the philological techniques of literary humanism to his critique of Aristotle.

What emerges from this whole complex picture of Gianfrancesco Pico is a strange mixture of new and old. Certain of his methods and techniques of criticism, certain of the philosophical doctrines which he rejects or calls into question mark him as a "modern man," forward looking and non-traditional. On the other hand, his most basic assumptions and his own conception of the world mark him as a traditionalist and as one who missed the significance of many of the more important elements of the modern civilization which was emerging during his own lifetime.

In the final analysis, Pico adds a new facet to our view of the Renaissance. His philosophical outlook shows us an approach to the criticism of Aristotelianism which is different from the more usual one issuing from Platonic, humanist considerations. Moreover, an analysis of his philosophical position in relation to his religious belief gives us a new insight into one of the forms which the faith-reason problem took in the epoch of the Reformation. Again, Pico as a layman having no official connection with the university teaching of philosophy gives us

another glimpse of a new type of philosopher; this kind of philosopher, just now coming into his own, will be a dominant force in early modern philosophy with the advent of Bacon, Hobbes, Descartes, Spinoza, and Leibniz. Pico's rejection of the school-philosophy foreshadows one dominant tendency of the major figures of the sixteenth and seventeenth century intellectual world.

These are some of the general conclusions which come from our study of Gianfrancesco Pico. Many of the more interesting and more enlightening points can be realized only after careful consideration of Pico's own detailed arguments. Hopefully, some of these will be made apparent in this study. The wealth of material at hand has made it necessary to be selective. Consequently, as the title indicates, I have focused upon what I consider to be Pico's most significant contribution, his critique of Aristotle. In working out his arguments against Peripatetic philosophy, Gianfrancesco applied principles drawn from his extensive learning. Some of these, which he utilized for the first time in the Renaissance, later played a significant role in the critique of scholasticism from which modern philosophy emerged.

GIANFRANCESCO PICO'S LIFE

Certamente fu gran danno la perdita di tanto huomo ai letterati, concio fosse cosa ch'era peritissimo in ogni grado di dottrina ed in graeco, hebreo, caldeo, ed arabico, in humanità, poesia, logica, filosofia, e theologia, come chiaramente dalle opere da lui scritte vero giudizio dar si può.

Leandro Alberti, Descrizione di tutta Italia (ca. 1535)

(1) *Early Life (1469-1491)*

The precise date of Gianfrancesco Pico della Mirandola's birth is unknown, but the year must have been 1469.¹ He was the son of Galeotto I Pico, brother of the famous Giovanni, and of Bianca Maria d'Este, the illegitimate daughter of Niccolò III d'Este.² Of Gianfrancesco's early years we know practically nothing, but it is generally supposed that he received at least part of his education at the Court of Ferrara.³ We get our first glimpse of him at the age of twenty-one,⁴ taking part in a tournament at the Sforza Court of Milan during the

¹ The inscription cited by Ceretti BP, II, p. 187 says that in 1524 he was 55 years old. This means that he could have been born either in 1468 or 1469. The letter to Gregorio Giraldis of 1520 (Opera, p. 880) which says that at that time he was 50 years old rules out the former. There is also a letter to Thomas Wolf (Opera, pp. 863-66), dated November 24, 1505, which gives his age at that time as being 35 years.

² For the genealogy of the Pico family see Pompeo Litta, *Famiglie celebri italiane* (Milan, 1819 f.), the section "Pico della Mirandola" (the series is bound differently in different libraries) with the corrections made by Ceretti in "La genealogia del conte Giovanni Francesco II Pico" in *Atti e memorie . . . per le provincie modenesi*, series IV, vol. I (1892), pp. 103-22. For the various members of the Pico family see always Ceretti BP. On the iconography of the Pico family see Vilmo Cappelletti, *Iconografia dei principi Pico* (Modena, 1963), pp. 14, 34, 43-44, and figs. 4, 13-14 for Gianfrancesco II.

³ So says Girolamo Tiraboschi, *Biblioteca modenese* (Modena, 1781-86), IV, p. 108 and Ferrante Borsetti, *Historia Almi Ferrariae Gymnasii . . .* (Ferrara, 1735), II, p. 303 without citing any evidence. A number of his early correspondents and friends were from Ferrara and the Duke of Ferrara was Pico's uncle, so such a supposition seems reasonable. There were also close ties with the Court of Milan. See note 5.

⁴ The reference to Gianfrancesco in 1483 cited in Ester Pastorello, *L'epistolario manuziano inventario cronologico-analitico (1483-1597)* (Florence, 1957), p. 319 seems to be in error. It refers rather to Giovanni Pico. See Eugenio Garin, *La cultura filosofica del Rinascimento italiano* (Florence, 1961), p. 256.

celebration of the marriage of Lodovico il Moro and Beatrice d'Este (January 26, 1491).⁵

In March of the same year he married Giovanna Carafa of Naples.⁶ With the dowry which he received on this occasion, he bought the hereditary title to the principate of Mirandola. The person from whom he bought the title was his famous uncle, Giovanni Pico,⁷ and this transaction is the first evidence we have of an association which was to be the most important single influence upon Gianfrancesco's career as a philosopher.⁸

(2) *Pico Emerges as a Humanist and Philosopher (1491-99)*

In the years immediately after his marriage, Gianfrancesco emerged as an important figure in his own right. Between 1491 and the end of the century he entered into correspondence with several men of intellectual and political prominence. He also began writing his first literary and philosophical works, several of his compositions being printed before the turn of the century.

Above all, Gianfrancesco was guided in his early literary endeavors by his uncle. The mutual affection between the two Picos at this period is shown not only in the fact that Giovanni indicated in his will (1491) that Gianfrancesco should have the first opportunity to buy his library,⁹ but also in letters between the two men, dated 1492.¹⁰ At this time Giovanni himself was only twenty-nine, and only six years older than his nephew, but his tone in these early letters is distinctly paternal, and Gianfrancesco's tone is correspondingly grateful, respectful, and affectionate.¹¹ After Giovanni's death in 1494, Gianfrancesco wrote an

⁵ Giulio Porro, "Nozze di Beatrice d'Este e di Anna Sforza. Documenti copiati dagli originali esistenti nell'Archivio di Stato di Milano," *Archivio storico lombardo* IX (1882) pp. 530-32. Litta (*op. cit.*) says that he was in the Sforza Court as a youth but gives no evidence for this.

⁶ Ceretti BP, II, pp. 58-60; Ceretti BME, p. 125; F. Ceretti, "Giunte a monografie pubblicate . . ." in *Atti e memorie . . . per le prov. modenesi e parmensi*, series III, vol. III, par. I (1885), p. 238.

⁷ Document printed in F. Calori Cesis, *Giovanni Pico della Mirandola detto la fenice degli ingegni* (Bologna, 1872) pp. 58-64.

⁸ We do not know how close the two Picos were during the 1480s when Giovanni was away from Mirandola most of the time. See Eugenio Garin, *Giovanni Pico della Mirandola: vita e dottrina* (Florence, 1937), pp. 20-48.

⁹ Calori Cesis, *op. cit.*, pp. 51-55.

¹⁰ Printed in Opera, pp. 817-19, 850-51.

¹¹ This is particularly evident in Giovanni's letter dated May 15, 1492 (Opera, pp. 817-19), of which we will speak more extensively in the next chapter, pp. 33-34. Its great popularity is attested to by the numerous times it was copied in manuscript and was printed and by the early translations of it. It was translated into French in 1498 by Robert Gaguin and into English by Thomas More before 1510.

admiring biography of his uncle designed to introduce the first edition of the *Opera* of Giovanni (Bologna, 1496).¹² For that edition he also wrote brief introductions to the *Oratio* (On the Dignity of Man) and the *Adversus Astrologiam*.¹³ In addition Gianfrancesco took over a philosophical discussion which his uncle had left unfinished: the debate with Antonio Cittadini of Faenza which had been initiated with Giovanni's treatise *De ente et uno*.¹⁴

The friendships which Gianfrancesco inherited from his uncle were of the highest importance to his later career. Among the friends whom Gianfrancesco presumably owed to the influence of Giovanni were Girolamo Benivieni, Marsilio Ficino, Aldo Manuzio, Matteo Bosso, Pietro Crinito, Domenico Grimani, Filippo Beroaldo the Elder, Lodovico Bigi Pittorio, Ercole Strozzi, and Battista Guarino.¹⁵

In addition to these men, who are generally considered to be associated more with the uncle than with the nephew, Gianfrancesco had a number of other close personal ties before 1500. Certainly important are the friends and acquaintances he had from his association

¹² For Gianfrancesco's editorial activities see Eugenio Garin (ed.), *Giovanni Pico della Mirandola. De hominis dignitate* ... (Florence, 1942), pp. 52-59. For precise information concerning the date of composition, printing history, and manuscripts of Gianfrancesco Pico's various works, I refer the reader to Appendix A.

¹³ These are printed in *Ioannis Pici* ... *Opera* (Basel, 1601), pp. 207, 278-79.

¹⁴ The correspondence between Gianfrancesco and Antonio continued until 1496. The entire discussion, beginning with Giovanni's treatise *De ente et uno*, is printed in the various editions of the uncle's *Opera*. Gianfrancesco's contribution to the polemic is also printed in the editions of his own works (e.g. *Opera*, pp. 74-89, 840-42). For the polemic in general see Garin, *Giovanni Pico della Mirandola. De hominis dignitate* ... , pp. 34-40.

¹⁵ Girolamo Benivieni dedicated an edition of his writings to Gianfrancesco (GKW 3850). Ficino wrote a letter of consolation to Gianfrancesco upon the death of his uncle (*Ioannis Pici* ... *Opera*, p. 275).

Aldo Manuzio, an early friend of Giovanni (Garin, *G. P. d. M., vita e dottrina*, p. 14), was a correspondent and friend of Gianfrancesco (letters in Ant. - Aug. Renouard (ed.), *Lettere inedite di Paolo Manuzio* (Paris, 1834)), dedicated to him an edition of Urbano Bolzano's *Institutiones Graecae Grammaticae* (H 2763 = H 16,098), and was the printer of the 1501 edition of Pico's *De imaginatione*.

Matteo Bosso of Verona corresponded with the younger Pico and praised his early works (*Opera*, pp. 837-39).

Pietro Crinito was also a correspondent (*Opera*, pp. 839-40) and a letter of his to Gianfrancesco was included with Poliziano's translation of Alexander of Aphrodisias' *Problemata* (in *Angeli Politiani Opera* ... (Lyon, 1533) II, 291-93; first edition, H 13,218).

To Domenico Grimani, who purchased the bulk of Giovanni's famous library, was dedicated Gianfrancesco's *De providentia Dei*. See Giovanni Mercati, *Codici latini Pico-Grimani-Pio* ... (Vatican City, 1938), pp. 1-38.

At least three letters passed between Gianfrancesco and Filippo Beroaldo the Elder (*Opera*, pp. 844-45).

Ludovico Bigi Pittorio dedicated no less than four early editions of his works to Gianfrancesco (GKW 4354, 4355, 4358, 4359) and mentioned him often in his poems.

Ercole Strozzi exchanged letters with Gianfrancesco (*Opera*, pp. 855, 861, 872, 873).

Battista Guarino, an early teacher of Giovanni, was consulted by the nephew at the time he was composing his *Life* of the uncle (*Opera*, p. 827).

with the Court of Ferrara. The most famous name of this group is that of Lodovico Ariosto, to whom Gianfrancesco addressed a letter in which he expressed an attitude not wholly favorable to vernacular poetry.¹⁶ Gianfrancesco also exchanged letters for many years with the Carmelite humanist Battista Spagnuolo of Mantua¹⁷ and addressed at least one letter to Battista's pupil, Giambattista Refrigeria.¹⁸

The important court physicians of the Este, Niccolò Leonicensino and Giovanni Manardo, perhaps taught him some of the medical theory which he later utilized in working out his sceptical position in the *Examen Vanitatis*. Leonicensino, who was also one of Giovanni Pico's earliest friends,¹⁹ dedicated his work *De morbo gallico* (1497) to Gianfrancesco.²⁰ Pico had extremely close ties with Manardo²¹ and had a great admiration for him. Gianfrancesco considered him to be one of his teachers, referring to him as *noster praeceptor*²² in the *Examen Vanitatis*. Moreover, Manardo helped Gianfrancesco to prepare his uncle's work against astrology for the press.²³ In 1493 Gianfrancesco called his friend and teacher from Ferrara to Mirandola, where he remained as his personal physician during the period prior to Gianfrancesco's first exile.²⁴ The relations between the two remained close, apparently,

¹⁶ Opera, p. 884. The letter is of uncertain date, but published already in 1507. In it Pico recalls earlier days when he and Ariosto were together in Ferrara and quotes some of his own vernacular verse. Gianfrancesco is mentioned once in the *Orlando Furioso* (XLVI, 17). The relation between Pico and Ariosto seems to have escaped the attention of most Ariosto scholars. It is not mentioned, for example, in the standard work by Michele Catalano, *Vita di Ludovico Ariosto* (Geneva, 1931).

¹⁷ Many letters passed between the two. See Opera, pp. 834-36, 862, 869, 873-74. For a complete list of the letters and the various printings of them see Graziano di S. Teresa, "Nuova cronologia della vita del b. Battista Mantovano," *Ephemerides carmeliticae*, IX (1958), pp. 423-42.

¹⁸ Opera, p. 819.

¹⁹ Garin, *La cultura filosofica* . . . , pp. 254-55.

²⁰ The dedicatory letter and Pico's letter of thanks are in Opera, pp. 843-44. On Leonicensino see especially D. Vitaliani, *Della vita e delle opere di Niccolò Leonicensino vicentino* (Verona, 1892). Arturo Castiglioni, who says that Leonicensino cited Gianfrancesco Pico in 1493, apparently has confused the latter with his uncle. See his "The School of Ferrara and the Controversy on Pliny," *Science, Medicine, and History: Essays . . . in Honour of Charles Singer*, ed. E. A. Underwood (London, 1953), I, pp. 269-79, esp. 274-76.

²¹ On Manardo see *Atti del convegno internazionale per la celebrazione del V centenario della nascita di Giovanni Manardo, 1462-1536*, Ferrara 8-9 dicembre 1962 (Ferrara, 1963); Giannandrea Barotti, *Memorie storiche di letterati ferraresi* (Ferrara, 1792), I, pp. 307-21; and Paola Zambelli, "Giovanni Mainardi e la polemica sull'astrologia," in *L'opera e il pensiero di Giovanni Pico della Mirandola nella storia dell'Umanesimo* (Florence, 1965), II, pp. 205-79.

²² V, 5; Opera, p. 720. See Barotti, *op. cit.*, pp. 312-15. Gianfrancesco also mentions him, along with Giovanni Pico, as being his philosophy teacher. See the letter, dated about 1496, in Opera, p. 842.

²³ Letter to Battista Spagnuolo dated February 1, [1496], Opera, p. 862. See Barotti, *op. cit.*, pp. 313-14 and Vincenzo Busacchi, "G. Manardo, maestro e medico di Gianfrancesco Pico della Mirandola," *Atti del convegno . . . Giovanni Manardo* . . . , pp. 97-98.

²⁴ He seems to have been in Mirandola from 1493 until 1502. Andrea Ostoja, "Notizie

until Pico's death. Manardo revisited Mirandola at least once and Gianfrancesco dedicated two works to his friend.²⁵

These relationships put Pico in contact with some of the foremost men of his time. Among his friends and acquaintances were scholars and poets, philosophers and physicians, humanists and clerics. As important as these contacts were for Gianfrancesco, none of them proved ultimately to be as important for the development of his own outlook toward philosophy as did his contact with Girolamo Savonarola.

According to the preface of his *Vita* of Savonarola,²⁶ Pico claims he first knew the friar only six years before his death. The Savonarola name, however, must have been well-known to Pico before this since Bianca Maria Pico, his mother, like the Savonarola family, was from Ferrara; and, in the *Vita*, Gianfrancesco recounts that she was once treated by Girolamo's grandfather, Michele, one of the most noted physicians of the fifteenth century.²⁷ In 1496 Gianfrancesco dedicated his *De morte Christi* to the friar, addressing him as *pater religiosissime* in the prefatory letter.²⁸ Both Gianfrancesco and his wife corresponded with Fra Girolamo,²⁹ but the extant letters all date from after 1496 and do not shed light on the earlier years of their acquaintance.

In 1497 Pico published a defense of Savonarola in reply to an attack by a Franciscan friar, Samuel Cascini.³⁰ But in May of the same year Savonarola was excommunicated, and Pico again undertook to defend him.³¹ In both of these first two defenses Pico wrote in Latin, giving lengthy, detailed replies to individual charges, and addressing himself

inedite sulla vita del medico e umanista ferrarese Giovanni Manardo," *Atti del convegno . . . Giovanni Manardo . . .*, pp. 99-140, esp. 106-09, 132.

²⁵ Ostojka, *art. cit.*, pp. 110 states without citing evidence that Manardi visited Mirandola between 1509 and 1512. For the correspondence see Opera, pp. 823, 826, 837 and *Ioannis Manardi . . . epistolarum medicinalium libri XX* (Venice, 1542), pp. 217-18. Pico also dedicated two works to his friend: the *Strix* (first edition, Bologna, 1523, fol. Aiii) and a *Quaestio de falsitate astrologiae* (Folger Library Ms, V.a.123, fol. 3^r). The latter has previously been presumed to have been lost. See Zambelli, *art. cit.*, p. 238.

²⁶ Ioannes Franciscus Picus, *Vita R. P. Fr. Hieronymi Savonarolae* . . . (Paris, 1674), I, p. 2.

²⁷ *Ibid.*, I, p. 4.

²⁸ Opera, p. 29.

²⁹ Roberto Ridolfi (ed.), *Le lettere di Girolamo Savonarola* (Florence, 1933), pp. 108, 119-21, 150-51, 165, 193.

³⁰ *Inuectiva in prophetiam fratris Hieronymi Savonarolae* [Milan, 1497], H 4566. It was reprinted at Milan a year later (R 456). Pico's work is entitled *Defensio Hieronymi Savonarolae adversus Samuelem Cassinensem* (H 13,003).

³¹ *Opusculum de sententia excommunicationis iniusta pro Hieronymi Savonarolae prophetiae innocentia*. This work was dedicated to Ercole d'Este, who apparently did not take kindly to it and who in a later letter to Pope Alexander VI denied any connection with Pico's work. See documents 145-46 in Antonio Cappelli, "Fra Girolamo Savonarola e notizie intorno al suo tempo", *Atti e memorie . . . per le provincie modenese e parmense*, IV (1868), pp. 399-400. On the problem of Ercole d'Este's sincerity see Roberto Ridolfi, *Vita di Girolamo Savonarola* (Florence, 1952), I, p. 350 and note 18.

primarily to church authorities. In the Spring of 1498, however, Savonarola's situation had so far deteriorated that Pico felt obliged to enlist the help of the citizens of Florence, and so he wrote a third defense of Savonarola, a brief letter in Italian designed to arouse public opinion on Savonarola's side.³²

But, despite the efforts of Gianfrancesco and others, Girolamo Savonarola was burned on May 23, 1498. As is well known, this did not end the debate over the friar's merits. Savonarola's defenders still fought his cause quite as avidly – perhaps even more avidly, for now they had a “martyr” to praise. Gianfrancesco continued to be a firm believer in Savonarola, and in 1501 he wrote a defense of one of the friar's followers,³³ dedicating it to Domenico Benivieni. Pico's best known work concerning Savonarola, however, is his version of the friar's life. Although not printed until 1674, there are literally dozens of sixteenth and seventeenth century manuscripts of this work still to be found throughout Italy and, indeed, even throughout Europe. The *Vita* underwent several revisions during Pico's lifetime.³⁴ The version which was ultimately printed was completed only in 1530 and there is evidence that Gianfrancesco made a later redaction before his death three years later,³⁵ indicating that he retained an interest in the friar's cause until the end of his life. Moreover, because of Pico's close association with Savonarola, the Florentine humanist Giovanni Nesi, a friend of Ficino and a follower of Savonarola, dedicated a work to him. This dialogue, *Oraculum de novo saeculo*,³⁶ completed September 1, 1496, and printed May 8 of the following year, considers Savonarola to be a true prophet.

(3) *The Prince of Mirandola (1499–1502)*

About a year after the death of Savonarola, Pico's own father died, precipitating him into a struggle which was to occupy most of his

³² *Epistola del conte Zuanfrancesco da la Mirandula in favore de fra Hieronymo da Ferrara dappoi la sua captura*. It is dated “in die dominice resurrectionis 1498.” R1321.

³³ *Operecta dello M. S. Johanfrancesco Pico della Mirandola in defensione della opera di Pietro Bernardo da Firenze servo di Jesu Cristo*. This work which is found in Magl. XXXV. 116 remained unpublished until 1943 when it was edited and privately printed by Paolo Cherubelli for the *Nozze Bellini-Manfredi, Aprile 1943* (Firenze). For further information see Cesare Vasoli, “Pietro Bernardino e Gianfrancesco Pico,” in *L'opera e il pensiero di Giovanni Pico della Mirandola* . . . , II, pp. 281–99.

³⁴ See J. Schnitzer, “La vita del Savonarola scritta dal Conte Gianfrancesco Pico della Mirandola,” *Ricerche religiose*, I (1929), pp. 429–34.

³⁵ *Ibid.*, p. 432.

³⁶ H 11,693. Manuscripts are to be found in the Biblioteca Riccardiana, nos. 383 and 384. The former is a dedication copy on vellum, the latter is an autograph. Pico also wrote some poems in praise of Savonarola. See Appendix A.

energies for the rest of his life, the struggle to retain title to the Principate of Mirandola. As we shall see, these political affairs played an important role in Gianfrancesco's life after about 1499. Time and time again they forced him to set aside his studies to engage in diplomacy or war.

In the generation before that of Gianfrancesco, there had been disputes in Mirandola over the rights of inheritance and the rights of rule.³⁷ The ruler of the state remained, however, Gianfrancesco's father, Galeotto I Pico. In 1491 Gianfrancesco's two younger brothers, Lodovico and Federico, had renounced any claim to the estate of their father;³⁸ and, in the same year, Galeotto had obtained an investiture from Emperor Maximilian for Mirandola and certain surrounding territories.³⁹ Included in this was a provision for the legal inheritance of Galeotto's realm by Gianfrancesco, his first born son. Two years later this investiture was renewed by the Emperor, who rejected the claim of Galeotto's brother Antonmaria to the inheritance.⁴⁰ Galeotto Pico died on April 9, 1499⁴¹, and Gianfrancesco inherited the land to which he was entitled by virtue of the renunciation of his brothers and the investiture of the Emperor. On May 16 of the same year, Gianfrancesco obtained a new investiture from the Emperor which again granted him the sole right to the territories of Mirandola.⁴²

All these precautions were of no avail, however. Gianfrancesco's brothers, Lodovico and Federico, contended that they had renounced their rights in 1491 only under constraint and that they still properly were entitled to a share of the inheritance.⁴³ Enlisting the aid of their disgruntled uncle, Antonmaria,⁴⁴ and relying on the help of their mother, Bianca Maria Pico, who lived with Gianfrancesco but favored the claims of the other children,⁴⁵ the two brothers set out to take Mirandola by force. Their first attempt, made in 1499, failed,⁴⁶ and

³⁷ See Papazzoni, pp. 98-114; Ceretti GIP; Ceretti AMP. The disputes are concisely summarized in Giuseppe Silingardi, *Contesi dei Pico della Mirandola nel secolo decimosesto studiate nelle lettere di Filippo de' Nerli* (Mirandola, 1892) pp. 3-6.

³⁸ Girolamo Tiraboschi, *Memorie storiche modenese* (Modena, 1793-94), IV, p. 196.

³⁹ Papazzoni, p. 114; Ceretti GIP, p. 84.

⁴⁰ Tiraboschi, *Mem. stor. mod.* IV, p. 196.

⁴¹ Papazzoni, p. 118; Cron An, p. 47, where the date is given incorrectly. See, however, pp. 169-70 where a letter is cited giving the correct date.

⁴² Tiraboschi, *Mem. stor. mod.* IV, p. 198.

⁴³ Ceretti LP, pp. 95ff.

⁴⁴ Cron An, p. 49; Sanuto II, cols. 1014, 1159; doc. XXII in Ceretti AMP, p. 285.

⁴⁵ See the note and document in Cron An, pp. 170-71 and also Ceretti BME, esp. doc VI, p. 143.

⁴⁶ Cron An, pp. 49-50. For a general survey of the events which ensued see Felice Ceretti, *L'assedio della Mirandola nel 1502* (Mirandola, 1877).

successive efforts throughout 1500 and 1501 also came to nothing.⁴⁷

In 1501 the uncle, Antonmaria, died,⁴⁸ leaving the two brothers to carry on alone; but, they found new and encouraging support from a source outside the family when Lodovico married the daughter of a powerful Milanese condottiere, Gian Giacomo Trivulzio.⁴⁹ With the help of Trivulzio and other friends from Ferrara and Mantua,⁵⁰ Lodovico and Federico launched a major offensive against Mirandola in June, 1502.⁵¹ After a siege of about fifty days, Mirandola finally fell on August 6.⁵² Gianfrancesco was captured⁵³ and forced to go into exile for the next eight and a half years. Before recounting the events of these years of exile, let us pause to mention Gianfrancesco's chief publications during the period before the fall of Mirandola.

In addition to those works of Pico of which we have already spoken, several other of his writings were printed before his exile from Mirandola. His two early philosophical works, *De studio divinae et humanae philosophiae* and *De imaginatione*, date from this period. The first of these, dedicated to Alberto Pio of Carpi,⁵⁴ shows certain indications of Savonarola's influence and gives us the first glimpse of Pico's unfavorable attitude toward secular philosophy, a viewpoint which will be developed in greater detail in his *Examen Vanitatis*, published in 1520. The *De imaginatione*, dedicated to Emperor Maximilian and beautifully printed by Aldus in 1501, still is largely derived from Aristotle, a philosopher whom Pico will sharply criticize in later works.

(4) Gianfrancesco's Exile (1502-1511)

Although Gianfrancesco's right to Mirandola had been reaffirmed with the addition of certain privileges by the Emperor in 1501,⁵⁵ Lodovico, upon seizing Mirandola, went to Maximilian with a plea to

⁴⁷ Ceretti, *L'assedio* . . . ; Cron An, pp. 49-51; Ceretti LI, pp. 123-30, 136-39.

⁴⁸ The date is given as March 6 in Cron Mod I, p. 262.

⁴⁹ Ceretti FT, doc. I and II, pp. 149-50.

⁵⁰ Cron An, p. 51; doc. VII in Ceretti LP, p. 147.

⁵¹ Cron An, p. 51; *Diario ferrarese dall'anno 1409 sino al 1502 di autori incerti*, *Rer. Ital. Scrip.*, XXIV, part VII (Bologna, 1928-33), p. 288.

⁵² Letter printed in Ceretti LP, p. 109. Also see Papazzoni, p. 118; Cron An, p. 53; Letter from Gianfrancesco to Pirckheimer in Opera, p. 829; Bernardino Zambotti, *Diario ferrarese dall'anno 1476 sino al 1504*, *Rer. Ital. Scrip.*, XXIV, part VII, p. 341. Details of the skirmishes which occurred during the siege can be found in Ceretti, *L'assedio* . . . , pp. 7-10; Ceretti LP, pp. 100-09 and docs. VI-XXV, pp. 147-62.

⁵³ His release was secured soon afterward through the combined efforts of his mother and wife. See Cron An, p. 52 and Papazzoni, p. 118.

⁵⁴ Alberto was the son of Leonello Pio and husband of Caterina Pico, Gianfrancesco's aunt and Giovanni's sister. See Litta, *op. cit.*, "Pio" and "Pico".

⁵⁵ Diploma printed in Ceretti BP, II, pp. 52-58.

legitimize his own claim.⁵⁶ In the meantime, after he had been driven from Mirandola, Gianfrancesco repaired to Novi, which was in the possession of the Pio of Carpi.⁵⁷ He tarried there, however, only a few days and by August 14, had already gone to Guastalla, from whence he was to proceed to Cremona and then to Pavia.⁵⁸ He then continued north, reaching Innsbruck on September 26, in time to be there when Lodovico's request for recognition reached the Emperor.⁵⁹ He next proceeded to Augsburg,⁶⁰ but returned to Italy in time to be back in Carpi again on February 16, 1503.⁶¹

Reassured by a new investiture that he had procured from the Emperor,⁶² Gianfrancesco set about to enforce his claim. In October of 1503, while Lodovico was absent from Mirandola, Gianfrancesco, aided by Alberto Pio and Giovanni (son of Annibale) Bentivoglio of Bologna, attempted to enter the fortress, having at his disposal 500 infantrymen and 100 light cavalry.⁶³ Bianca Maria and Federico, who were in control of Mirandola during Lodovico's absence, obtained aid from the Marquis of Mantua and were able to repulse Gianfrancesco's attempt.⁶⁴ Later in the same year Gian Giacomo Trivulzio sent help, in the form of more soldiers, to Mirandola to discourage further attempts on the part of Gianfrancesco to recover the fortress.⁶⁵ At the same time, however, Gianfrancesco was able to win the support of the Marquis of Mantua to his side.⁶⁶ It seems that no serious outbreaks of hostility occurred during 1504, but Bianca Maria complained about certain suspicious activities of Gianfrancesco and his men in the vicinity of Mirandola.⁶⁷ Nothing seems to have come of this, however. Later in the same year Federico Pico died after an illness of several months.⁶⁸

In the Spring of 1505 Gianfrancesco went again to Germany, perhaps primarily to gain further support from the Emperor,⁶⁹ but also to

⁵⁶ Doc. XXVI in Ceretti LP, pp. 162-63.

⁵⁷ Cron An, p. 53.

⁵⁸ Ceretti LP, doc. XXVII, p. 163.

⁵⁹ Sanuto, IV, col. 334.

⁶⁰ Sanuto, IV, col. 462; letter to Pirckheimer in Opera, p. 829.

⁶¹ Letter in Archivio Gonzaga, Filza 1332 (anno, 1503).

⁶² Cited in Ceretti LP, p. 121.

⁶³ Sanuto, V, col. 221; Ceretti BME, p. 134 and doc. VIII, p. 144.

⁶⁴ Doc. LII and LIII in Ceretti LP, pp. 181-82.

⁶⁵ Doc. LIV in Ceretti LP, pp. 182-83; Sanuto, V, col. 253.

⁶⁶ Ceretti LP, p. 122 and doc. LV, p. 183.

⁶⁷ Doc. X in Ceretti BME, p. 147.

⁶⁸ Doc. IX, XI, XII in Ceretti BME, pp. 146-48; doc. XLVI in Ceretti LP, p. 177.

⁶⁹ Letters to Adolphus Phrissius (February 14), Matthew Lang (April 28) and Emperor Maximilian (May 24) in Opera, pp. 830, 860, 846. He had returned by the end of May. See the letter dated May 22 in Ceretti LP, pp. 130-31.

enjoy the company of various literary friends he had there.⁷⁰ The same year also saw the betrothal of Roberto Boschetti to Susanna Pico, daughter of Galeotto I Pico.⁷¹ Since Susanna was attached to those actually in possession of Mirandola, this brought into the camp of Gianfrancesco's opponents the strength of another important condottiere.

In January of the next year, Bianca Maria died,⁷² leaving only Lodovico of the three who had originally opposed the claim of Gianfrancesco. In her will ⁷³ she vehemently condemns the recent actions of Gianfrancesco, thus indicating the bitterness of feeling to which the prolonged struggle between the two factions had already led. In March of 1505, again with the aid of Alberto Pio, Gianfrancesco made another futile attempt to take the fortress.⁷⁴ By June, it was being rumored that Lodovico wished to attempt a reprisal against the territory of the Pio, but apparently nothing came of this.⁷⁵ At any rate, Alberto went to Milan in August and then on to France in an attempt to straighten out Gianfrancesco's affairs. Probably at Alberto's behest, Pico was sent 700 scudi by the Marquis of Mantua.⁷⁶ Gianfrancesco must have been in contact with Julius II while Alberto was away, for on October 12 he wrote to the Marquis of Mantua expressing the hope that the Pope would soon take Bologna; then he would be able to aid Pico in his attempt to recover Mirandola.⁷⁷ Although Bologna fell to the Pope's army on November 10,⁷⁸ Gianfrancesco had to wait over four years for his aid in winning back Mirandola. Gianfrancesco, along with Alberto Pio, who had returned from France, and Francesco Gonzaga, seems to

⁷⁰ Charles Schmidt, *Histoire littéraire de l'Alsace* (Paris, 1879), II, p. 76. Of these literary and cultural relations we shall say more below.

⁷¹ The marriage actually took place the following year. See Pietro Balan, *Roberto Boschetti e gli avvenimenti italiani de' suoi tempi (1494-1529)* (Modena, 1879-84), I, I, p. 45. There is a copy of this rare book in the Vatican Library. For evidence that Susanna is really the natural daughter of Galeotto, and not of Gianfrancesco as Balan says, see Ceretti BP, IV, pp. 68-70.

⁷² Ceretti BME, pp. 136-37 and doc. XIV, p. 167; Papotti, p. 8.

⁷³ Doc. XIII in Ceretti BME, pp. 148-67. It is dated January 11, 1506 (one day before her death), but was actually made on March 20 of the preceding year (pp. 150-51). Note particularly the strong language that is directed against Gianfrancesco on pp. 161-62.

⁷⁴ Letter XVI of Alberto Pio in Policarpo Guaitoli, "Lettere inedite dei Pio signori di Carpi dall'anno 1480 al 1529," *Memorie storiche e documenti sulla città e sull' antico principato di Carpi*, II (1879-80), pp. 308-11. See also Ceretti LP, pp. 123-24.

⁷⁵ Guaitoli, "Lettere inedite . . .", letter XVII, pp. 312-13.

⁷⁶ *Ibid.*, letter XXII and XXIII, pp. 327-31. Gianfrancesco's receiving of the 700 scudi through the help of Alberto Pio is also confirmed by a letter in Vaticano latino 3214, fol. 336 (284)r.

⁷⁷ Doc. LVII in Ceretti LP, p. 184; For Julius II's decision to march against Giovanni Bentivoglio and his later excommunication of him see L. Pastor, *Storia dei Papi*, new Italian version edited by A. Mercati (Rome, 1958 f.) III, pp. 707-15.

⁷⁸ Pastor, *op. cit.*, III, p. 717.

have given assistance to the Pope in his campaign against Bologna.⁷⁹

Precisely what Gianfrancesco did during the next year, 1507, is not entirely clear, although he was in Novi part of the time.⁸⁰ His followers must have been making periodic incursions into the territory of Mirandola to do what damage they could to Lodovico.⁸¹ During 1508 and 1509, Gianfrancesco spent some time in Rome,⁸² although he was in Novi and the surrounding territory a good deal of the time.⁸³ While at Rome men were sent by Lodovico to attempt to kill him, but this proved to be unsuccessful.⁸⁴ The second half of 1509 saw Gianfrancesco in the service of the Emperor as Imperial Councillor in Vicenza during the war of the League of Cambrai.⁸⁵ In the meantime, Lodovico, who was in the service of the Pope, also participated in the war.⁸⁶ On December 15, 1509, while aiding the Duke of Ferrara against Venice, Lodovico was killed by a Venetian artillery shell in the Battle of Polesella in Veneto.⁸⁷

With this development, Gianfrancesco wasted no time in attempting to re-establish his claim to Mirandola. In the same letter to his sister-in-law, Francesca Trivulzio Pico, in which he expressed the condolences for the death of his brother, he expressed his wish to re-enter Mirandola.⁸⁸ Simultaneously, he made other moves to bring about this end: attempting to get help from Mantua and attempting to win the citizens of Mirandola over to his side.⁸⁹ These were to no avail and Francesca

⁷⁹ Cron Mod II, I, p. 3; Sanuto, VI, cols. 471, 490. Gianfrancesco was in Bologna on December 11, apparently to ask the Pope's aid (Sanuto, VI, col. 507).

⁸⁰ Archivio Gonzaga, Filza 1332 (anno 1507) has letters of his from Novi, dated May 12, May 16, and November 3.

⁸¹ Ceretti LP, doc. LVIII, pp. 184-85.

⁸² Cron An, p. 54 says that he was at Rome from 1508 to 1510. This, however, cannot be true since there is much evidence for his being elsewhere, as we shall see below.

⁸³ Archivio Gonzaga, Filza 1332 (anni 1508, 1509, and 1510) contains numerous letters by Gianfrancesco sent from Novi and the surrounding towns. We also know that he was in Novi in August, 1508 when the German humanist Ringmann Philesius visited him there (Schmidt, *op. cit.*, II, p. 117).

⁸⁴ Cron An, p. 54 and note 135, p. 173.

⁸⁵ Sanuto, IX, cols. 273-74, 304, 328; Bartolommeo Bressan (ed.), *Lettere storiche di Luigi da Porto dall'anno 1509 al 1528* (Florence, 1857), no. 20, pp. 108-11; Gerolamo Zugliano, *Annali della guerra di Cambray*, MS in Biblioteca del Seminario di Padova, 189, fols. 24r, 25r, 36v. I am indebted to Dr C. H. Clough of Birmingham University for these references.

⁸⁶ Ceretti LP, pp. 129-34 and doc. LXI-LXX, pp. 187-96.

⁸⁷ Cron An, p. 55 and notes 136-38, pp. 173-74 (the date is incorrectly given as 1508); Papazzoni, p. 119 and note 98, pp. 157-60; Papotti, pp. 8-9; Sanuto, IX, cols. 397-400 (Here it is mistakenly stated that it was Gianfrancesco Pico who was killed); Cron Mod II, I, p. 74; Ceretti LP, pp. 134-35; Antonio Cappelli, *Lettere di Ludovico Ariosto*, 3rd ed., (Milan, 1887), p. 9.

⁸⁸ Ceretti FT, doc. III, pp. 150-51.

⁸⁹ For a detailed account of the various events that took place in December 1509 see Ceretti FT, pp. 105-08 and doc. III-VI, pp. 150-54;

continued to act as regent in behalf of the heir to the country,⁹⁰ her son, Galeotto, then less than two years old.⁹¹ The Emperor, however, accorded Gianfrancesco his protection on July 6, 1510.⁹² About the same time, the Pope had decided to drive the French from Italy and Gianfrancesco received his assurance that he would have aid in winning back Mirandola,⁹³ since Trivulzio and Mirandola were allied to the French and were under the protection of King Louis XII.⁹⁴

Gianfrancesco seems to have been in the service of the Pope in his campaign against the French a good part of the second half of 1510.⁹⁵ Alberto Pio, then a papal counselor, prevailed upon the Pope to attack Mirandola before proceeding to Ferrara, a more difficult objective.⁹⁶ Francesca, realizing the danger, sought help from her father, who sent a nephew, Alessandro Trivulzio, to aid Boschetti in the defense of Mirandola.⁹⁷ The siege of the small town began on December 19⁹⁸ and lasted until January 20, 1511, when Julius was finally able to enter.⁹⁹ The Pope remained there until February 1, at which time he left, after having re-established Gianfrancesco Pico as legal ruler. This he did not do, however, before Pico promised to pay him 600 ducats for his troubles.¹⁰⁰

⁹⁰ The citizens of Mirandola chose Galeotto II as their ruler by common consent (Doc. VI in Ceretti FT, pp. 153-54). The Emperor also seems to have recognized Francesca as the legal ruler at this time, for he promised to send someone to help her govern the state (letter in Papazzoni, pp. 158-59). This was confirmed on January 6 of the following year when a formal investiture arrived from the Emperor (doc. XII in Balan, *Roberto Boschetti* . . . I, II, p. 45).

⁹¹ He was baptized October 31, 1508. See Ceretti BP, II, p. 6; Papotti, p. 8.

⁹² Papotti, pp. 10-11.

⁹³ Ceretti FT, pp. 108-09. The letters cited are in the Archivio Gonzaga, Filza 1332 (anno 1510), dated January 10 and August 23. For a general survey of Julius II's activities from the time he turned against the French until the taking of Mirandola see Pastor, *op. cit.*, III, pp. 756-69.

⁹⁴ Cron Mod II, I, p. 114; Papotti, p. 11; Francesca received a formal recognition of her rights to Mirandola from King Louis XII on October 3, 1510. See Ceretti, "Diploma di Luigi XII re di Francia a Francesca Trivulzio-Pico contessa della Mirandola," *Atti e memorie . . . per le provincie modenesi*, series IV, vol. VIII, pp. 147-50. For the French side see *Lettres du Roy Louis XII et du Cardinal George d'Amboise* (Brussels, 1712), II, pp. 88, 91, 94, 99, 101, 103-04.

⁹⁵ Letters dated August 2 and August 23 in Archivio Gonzaga, Filza 1332 (anno 1510) are from Bologna and "ex foelicibus castris." He was with the Pope in Bologna on October 31, Luigi Frati (ed.), *Le due spedizioni militari di Giulio II tratte dal diario di Paride Grassi bolognese*, in *Documenti e studi pubblicati per cura della R. deputazione di storia patria per le provincie di Romagna*, vol. I (1886), p. 205; Sanuto IX, cols. 548, 550.

⁹⁶ Cron An, pp. 55-56.

⁹⁷ Balan, *Roberto Boschetti* . . . I, I, p. 73; Sanuto, XI cols. 740-42, 743-45.

⁹⁸ Cron An, p. 56.

⁹⁹ The details of the siege need not detain us. See Papazzoni, pp. 119-20; Cron An, pp. 56-59, 175-93; Sanuto, XI, cols. 676-788, *passim*; Ceretti FT, pp. 110-15; Cron Mod II, I, p. 128; Pietro Balan, *Gli assedi della Mirandola di Papa Giulio II nel 1511* . . . (Mirandola, 1876), pp. 9-18.

¹⁰⁰ Cron An, p. 59; and document on p. 191.

During the troubled years when Gianfrancesco was attempting to recover his inheritance he still had some time to devote to study and the intellectual life. His two trips to Germany (in 1502 and 1505) brought him into close contact with some of the foremost German humanists. It is quite possible that he knew some of these men before his trips to the north, for several of them had already visited Italy or had studied there. Among those with whom Pico was in contact during this period are Willibald Pirckheimer, Conrad Celtes, Johann Reuchlin, Thomas Wolf, Ulrich Zasius, Conrad Peutinger, Beatus Rhenanus, Johann Essler, Matthias Ringmann Philesius, and Jacob Wimpfeling.¹⁰¹ It was through these men, Wolf in particular, that many of his works came to be printed in Germany.¹⁰² During the years 1506 and 1507 an edition of Gianfrancesco Pico's *Opera* issued from the press of Johann Knobloch of Strasbourg in several instalments. In addition to the works which had already been printed, in this edition appeared for the first time *De rerum praenotione*, the *Theoremata de fide*, the poem *Staurostichon*, four books of letters, a translation of a work attributed to Justin Martyr, and an explanation of a passage from St. Hilary of Poitiers' *De trinitate*. This was but the first of many printings of Gianfrancesco's works north of the Alps in the course of the sixteenth and seventeenth centuries.

¹⁰¹ There is a letter from Pico to Pirckheimer dated December 2, 1502 (*Opera*, p. 829).

There is also a letter to Celtes from the same year (Hans Rupprich (ed.), *Der Briefwechsel des Konrad Celtis* (Munich, 1934, p. 524). For other associations between the two see *Ibid.*, pp. 530, 533, 622, 649.

There is a letter from Gianfrancesco to Reuchlin dated April 5, 1505 (*Opera*, p. 834) and others from later.

Gianfrancesco wrote a letter to Wolf on November 24, 1505 (*Opera*, pp. 863-66) after having visited him the preceding April (Schmidt, *op. cit.*, II, p. 76).

A single letter from Pico to Zasius is known, dated November 21, 1505 (*Opera*, p. 866).

Gianfrancesco wrote Peutinger from Mantua on August 15, 1506 (*Opera*, p. 885).

Rhenanus addressed a letter to Pico from Schlettstadt on December 31, 1507 (Horowitz & Hartfelder (eds.), *Briefwechsel des Beatus Rhenanus* (Leipzig, 1886), p. 124). He also speaks of Pico's *Hymni heroici tres* in a letter to Jacobus Fullonius in 1508 (p. 15) and wrote a dedication letter for a later edition (Strasbourg, 1511) of the same work (p. 40). See also Gustav Knod, *Aus der Bibliothek des Beatus Rhenanus* (Leipzig, 1889), p. 38.

There is a letter from Pico to Essler, dated August 29, 1508 from Novi, which was prefaced to an edition of Ptolemy's *Geographia* (Claudii Ptolemei . . . *Geographiae opus* [Strasbourg, 1513], fol. A₁v).

Ringmann, a young student of Wimpfeling's, went to Italy in 1505 in behalf of Wolf to obtain manuscripts of Gianfrancesco's works to be printed in Germany (i.e. the Strasbourg edition of 1506-07). See Schmidt, *op. cit.*, I, p. 60; II, p. 76; *Opera*, pp. 863-66 (letter to Wolf), and 866 (letter to Zasius). He also returned to Italy in 1508 to see Gianfrancesco a second time (Schmidt, *op. cit.*, II, p. 117).

Wimpfeling wrote a preface to the 1504 Strasbourg edition of Giovanni Pico's *Opera* in which he recalls having met Gianfrancesco during his 1502 visit to Germany.

¹⁰² See the letters to Wolf and Zasius (*Opera*, pp. 863-66), which also list the works which had been completed by Pico by that time.

He also published new works in Italy during the time of his exile. At Milan, in 1507, Alessandro Minuziano printed the first edition of Pico's *Hymni heroici tres*, which was accompanied by a long commentary by Gianfrancesco himself and two other poems, *Argumentum hymnorum carmine elegiaco* and *Votum pro salute coniugis*. A year later appeared a philosophical treatise, *De providentia Dei*, which was dedicated to Cardinal Domenico Grimani, who had purchased Giovanni Pico's famous library. This work was printed in Novi under the auspices of Gianfrancesco's protector, Alberto Pio. Of the works published during the time of his exile, it is worth noting that one is dedicated to Alberto Pio, his protector, and one each to Pope Julius II and Emperor Maximilian, whose aid he was constantly striving for.

Gianfrancesco also continued his correspondence with old friends and developed several new friendships. He dedicated his translation of a work attributed to Justin Martyr to Zanobi Acciaiuoli with whom he also exchanged letters discussing scholarly questions.¹⁰³ Pico became close friends with Celio Calcagnini and Lilio Gregorio Giraldi, both of Ferrara.¹⁰⁴

(5) *Success and Exile Again (1511-1514)*

Although it took Gianfrancesco more than eight years to recover his land, and he had had to divert himself time and again from his scholarly pursuits to see to his political affairs, his stay in Mirandola was a short one. His difficulties were far from over. Already, a few days after the Pope had left Mirandola, early in 1511, Gianfrancesco sensed that the French might attack again. In compliance with his request, Julius dispatched troops to aid in the defense of Mirandola should this occur.¹⁰⁵ And Gianfrancesco's fears were not unfounded, for Gian Giacomo Trivulzio, upon hearing of the fall of Mirandola to the Pope, determined to retake it.¹⁰⁶ After obtaining from the King of France

¹⁰³ From 1502 we have two letters by Pico and one by Acciaiuoli (Opera, pp. 820-22).

¹⁰⁴ Letters between him and Calcagnini are to be found in Opera, pp. 825, 873 and in *Caetii Calcagnini . . . Opera aliquot* (Basel, 1544), pp. 104, 106-07, 111-12.

Giraldi was already mentioned in the earlier letters between Pico and Calcagnini (Opera, pp. 825, 873) and later himself exchanged letters with Gianfrancesco (Opera, p. 877). He also saw to the education of Gianfrancesco's eldest son, Giandommaso, and dedicated works to both Picos, father and son. See *Lilii Gregorii Gyraldi . . . operum quae extant omnium . . . tomi duo* (Basel, 1580) I, p. 639; II, pp. 1, 422, 445-46, 465.

¹⁰⁵ Sanuto, XI, col. 800; Cron An, p. 59; J. S. Brewer (ed.), *Letters and Papers, Foreign and Domestic, of the Reign of Henry VIII, Preserved in the Public Record Office, the British Museum and Elsewhere*, 2nd ed. (London, 1920), I, pp. 413, 587.

¹⁰⁶ Papazzoni, pp. 120-21.

the right to take command of the French Army,¹⁰⁷ Trivulzio proceeded first to take Concordia,¹⁰⁸ and, on June 4, he entered Mirandola.¹⁰⁹ Driven out again, Gianfrancesco escaped to Modena.¹¹⁰ It is not certain what he did during the next two years. He seems to have been in Rome part of the time,¹¹¹ for this is when he had his famous debate with Pietro Bembo on the matter of imitating classical authors. On the other hand, he visited Bernardo Dovizi in Budrio on January 12, 1512.¹¹² He fought with the army of the Holy League in the Battle of Ravenna in April of the same year, at which time he was apparently taken prisoner by the French.¹¹³ During all of this, however, attempts were being made by both Gianfrancesco and Francesca to reach some sort of accord in their dispute.¹¹⁴

Finally, with the aid of the diplomatic abilities of Matthew Lang, bishop of Gurk and Imperial Vicar and Plenipotentiary in Modena, an agreement acceptable to both parties was arrived at.¹¹⁵ The terms of the agreement are basically simple.¹¹⁶ Francesca had the right to divide the state into two parts and then Gianfrancesco had the obligation to choose one of these parts for himself, within a year. There was the added provision that whichever of the parties selected Mirandola pay the other 10,000 ducats in gold within forty days of the choice. On August 20, 1514, Gianfrancesco chose Mirandola and the surrounding territory, while Francesca was left with Concordia.¹¹⁷ This provisional agreement, however, in no way meant that the disputes between the two had come to an end, for the next years were still

¹⁰⁷ Carlo de' Rosmini, *Dell'istoria intorno alle militari imprese e alla vita di Gian-Jacopo Trivulzio* ... (Milan, 1815) I, pp. 416-17.

¹⁰⁸ Sanuto, XII, col. 167; Papazzoni, p. 121.

¹⁰⁹ Cron An, p. 61; Papazzoni, p. 121; Sanuto, XII, cols. 221, 223; Cron Mod II, I, p. 131.

¹¹⁰ Cron Mod II, I, p. 131.

¹¹¹ The absence of correspondence to Mantua from April 25, 1511 to October 11, 1513 (in Archivio Gonzaga, Filza 1332) indicates that he probably was away from Novi during this time. We have evidence that he was in Rome on November 13, 1511 (letter to Peutinger in Erich Koenig (ed.), *Konrad Peutingers Briefwechsel* (Munich, 1923), pp. 172-73); about July 26, 1512, when another attempt was made on his life (Ceretti FT, doc. XXII, p. 163); August 1, 1512 (letter to Giralaldi in Pico's *De venere et cupidine expellendis carmen* (Rome, 1513), fol. Biv^r); September 29, 1512 (letter to Bembo in Opera, p. 123); and November 9, 1512 (letter from Joannes Pierus Valerianus to Matthew Lang in *Rerum Germanicarum Scriptores* (Strasbourg, 1717), p. 477).

¹¹² He was there with the forces of the Holy League. See G. L. Moncallero (ed.), *Epistolario di Bernardo Dovizi da Bibbiena* (Florence, 1955f.), I, p. 441.

¹¹³ Sanuto, XIV, cols. 229, 272; Cron An pp. 62-63.

¹¹⁴ Ceretti FT, pp. 122-25 and doc. XX, XXI, XXIII, XXIV, pp. 161-64; Cron An, pp. 61-62; Sanuto, XV, cols. 107, 125, 129, 164, 173, 212-13.

¹¹⁵ Sanuto, XVII, cols. 229, 272; Cron An, pp. 62-63.

¹¹⁶ Balan, *Roberto Boschetti* ... I, I, pp. 78-81 and doc. XXI in I, II, pp. 54-63 gives the full details. See also Ceretti FT, pp. 125-28 and Sanuto, XVII, col. 229.

¹¹⁷ Balan, *Roberto Boschetti* ... I, I, p. 82; Cron An, p. 63.

marred by incursions by one and then the other into the opponent's territory.¹¹⁸

(6) *The Return to Mirandola (1514-1533)*

After his restoration to Mirandola, Gianfrancesco was again in familiar surroundings and he could again devote himself to study. He had written relatively few works during the period of his exile, for he was compelled to channel most of his energies into non-intellectual activities. He did however manage to print two additional poems, *De expellendis venere et cupidine* and a *Hymn to St. Lawrence*, at Strasbourg in 1513. These were dedicated to Gianfrancesco's friend from Augsburg, Conrad Peutinger. Probably later in the same year these same poems were reprinted in Rome with the addition of a *Hymn to St. Geminianus*. Gianfrancesco also seems to have composed his *De reformandis moribus oratio* about the same time. This work, dedicated to Leo X, is an exhortation to the Pope and to the assembled Lateran Council to see to the reformation of morals within the Church. It was not printed until 1520.¹¹⁹

In 1516, Pico published in Rome his *De amore divino*, which was dedicated to Pope Leo X, the first of four works to be directed to the Medici Pope. Two years later his exchange of letters with Bembo, the *De imitatione*, appeared in print for the first time at Basel. With it appeared also his *Physici libri duo*, which consists of two short treatises on physical questions, *De appetitu primae materiae* and *De elementis*. The first of these was dedicated to Cardinal Bernardo Dovizi of Bibbiena and the second to Matthew Lang, who had been instrumental in bringing about accord with Francesca Trivulzio.

In 1519, Leo X gave Gianfrancesco the right to establish a printing press in Mirandola.¹²⁰ In August of the same year appeared the first product of the press, *De veris calamitatum causis nostrorum temporum*, dedicated to the Pope. The following year, appeared the first edition of

¹¹⁸ We shall not recount the tiresome details of these struggles here. See Cron An, pp. 64-75, 194-98; Ceretti FT, pp. 133-45, 167-76; the letters in *Petri Bembi . . . Epistolarum Leonis Decimi . . . nomine scriptarum libri sexdecim* (Cologne, 1584), pp. 297-302; Ceretti, "Una pagina da aggiungere alla storia delle discordie tra la contessa Francesca Trivulzio, madre e tutrice del conte Galeotto II Pico, ed il cognato conte Giovan Francesco II," *Francesco Ravagli: Miscellanea di erudizione e belle arti*, I (1911), pp. 187-89.

¹¹⁹ On this work see Pastor, *op. cit.*, IV, part II, p. 5; Hefele-Hergenroether-Leclercq, *Histoire des conciles d'après les documents originaux*, French trans., (Paris, 1907f.) VIII, part I, pp. 539-41; Charles B. Schmitt, "Gianfrancesco Pico della Mirandola and the Fifth Lateran Council", forthcoming in R. J. Schoeck (ed.), *Studies in the Fifth Lateran Council*.

¹²⁰ Printed in Opera, fol. 221^r and often elsewhere. On the Mirandola press see F. J. Norton, *Italian Printers 1501-1520, an Annotated List with an Introduction* (London, 1958), p. 53.

Pico's largest and most important work, the *Examen vanitatis doctrinae gentium*, also dedicated to Leo. The year 1520 also saw the first printing of four more works at Hagenau. These are the treatise *De reformandis moribus*, and three new religious hymns, dedicated to St. Martin, St. Mary Magdalen, and St. Anthony.

During this period Gianfrancesco continued his correspondence with old friends and also exchanged letters with several new ones. His correspondence with Pirckheimer from the second decade of the century indicates that Gianfrancesco sent him the Greek copy of Theophrastus' *Characters*, which the German humanist later translated into Latin.¹²¹ Other letters during these years also passed between Pico and Giraldis¹²² and Reuchlin.¹²³ One of the letters to the former, dated 1514, is one of the more interesting and important of Pico's epistles. In it, Gianfrancesco gives a list of his works that had been completed by that time, and, from this letter we can see how many of his writings have been lost.¹²⁴ From the same period we have two letters to the prominent Hebrew scholar, Sante Pagnini,¹²⁵ from whom Gianfrancesco probably got help in his study of the writings of Crescas and of other Hebrew works. There is also a single extant letter to the famous French humanist, Jacques Lefèvre d'Étaples.¹²⁶ Although brief, this letter is of some importance, for it discusses the *Examen Vanitatis*. Gianfrancesco also received a letter from the Friuli humanist and papal legate, Girolamo Rorario (or Rarario). This is prefaced to a dialogue, *Fortuna*, which was dedicated to Pico shortly after his participation in the Battle of Ravenna.¹²⁷

Gianfrancesco's political affairs did not change markedly after 1520. Constant skirmishes took place between his men and those of the enemy.

¹²¹ Opera, p. 880; Emil Reicke (ed.), *Willibald Pirckheimers Briefwechsel* (Munich, 1940-56), II, pp. 564-67. Also see Pirckheimer's dedication letter to Albrecht Duerer for his translation (Willibald Pirckheimer, *Tractatus politici, historici et philologici, quotquot in vetustis operibus et chartis manuscriptibus reperiri potuerunt* (Frankfurt, 1610) p. 213) and the indications in *De vita Pirckheimeri* (*ibid.*, pp. 15, 23).

¹²² Opera, pp. 877-80. This letter was first written in 1514, it seems. See the version printed in *Ioannis Francisci Pici . . . de amore divino* (Rome, 1516), fols. O₁₁-O₁₄. It was also reprinted with dates of 1516 and 1520.

¹²³ Ludwig Geiger (ed.), *Johann Reuchlins Briefwechsel* (Tubingen, 1875), pp. 275-77.

¹²⁴ For a list of Pico's lost works see Appendix A.

¹²⁵ Opera, pp. 880-83. These letters are also printed in Pagnini's Latin translation of the Bible (*Biblia. Habes in hoc libro prudens lector utriusque instrumenti novam translationem aeditam a reverendo sacrae theologiae doctore Sante Pagnino Lucensi . . .* (Lyon, 1527), fols. d₁^v-d₁₁^r).

¹²⁶ Opera, p. 876.

¹²⁷ This seems never to have been printed. It is preserved in manuscript S. Gregorio 16 of the Biblioteca Nazionale in Rome, fols. 10^v-11^r. See also Gian-Giuseppe Liruti, *Notizie delle vite ed opere scritte da' letterati del Friuli* (Venice, 1760-1830), II, p. 274. The letter and dialogue are dated 1513 in Pio Paschini, "Un pordenonese nunzio papale nel secolo XVI, Girolamo Rorario" in *Memorie storiche forogiuliesi*, XXX (1930), fasc. II, p. 47.

At the same time there were other troop movements in the vicinity of Mirandola as a result of the continuing Italian Wars, and Pico himself seems to have again taken up the sword to participate in warfare.¹²⁸ Rather than go into these events in detail, I shall say a few words about certain other activities of our author during these years. One of these activities was the pursuit of certain religious interests, possibly in consequence of his early involvement with the career of Savonarola. In 1507 we hear of his having some kind of religious association with a Mantuan nun of the Dominican order, Beata Osanna Andreasi.¹²⁹ In 1519 we hear of another Dominican nun, Beata Caterina da Racconigi,¹³⁰ whose reputation as a mystic apparently attracted him. He went to visit her in 1526, and in 1529 provided her with a place to live in Mirandola.¹³¹ He later wrote a life of Beata Caterina, which apparently gained some success as a popular religious biography.¹³²

Most of Pico's other writings from this period have been published. They include a literary dialogue entitled *Strix sive de ludificatione daemonum*, a work written primarily against witchcraft and printed in 1523. In the same edition are also printed for the first time two other short works, a poem, *Ad excitandum genus humanum a vitae huius somno ad futurae vigiliam*, and a long letter to Giampietro Carafa in defense of Dionysius the Areopagite. Later in the same year appeared, again at Bologna, a short treatise *De animae immortalitate digressio*, which is principally an attack on the Averroist teaching regarding the individual human soul.

In 1524, there appeared an Italian translation of the *Strix*, made by Pico's friend Leandro Alberti, who had also written a prefatory letter to the original edition of the same work. From the same year we have

¹²⁸ For the details of these things see Cron An, pp. 75-79; 199-200; Sanuto, XXVIII, cols. 205-06, 578-79, 617; XXIX, cols. 50, 155-56; XXXIII, col. 121; XXXVIII, cols. 219, 222, 273, 336; XXXIX, col. 449; XXXXI, cols. 289, 431; XLII, col. 763; XLIV, col. 205; XLVII, cols. 462, 505; XLIX, col. 356; LI, col. 150; LIV, col. 520; LV, cols. 170, 259; Cron Mod II, II, pp. 260-62, 309; III, p. 285; IV, p. 128; Ceretti GIIP, pp. 236-50, 306-21, Ceretti LI, pp. 131-36; Silingardi, *op. cit.*, pp. 7-21.

¹²⁹ Carlo Dionisotti, "E. Barbaro e la fortuna di Suisseth" in *Medioevo e Rinascimento, Studi in onore di Bruno Nardi* (Florence, 1955), I, p. 223.

¹³⁰ For a recent study of Caterina with ample documentation and bibliographical indications see Renzo Amedeo, *Operai nella vigna del Signore, santi, vescovi, e religiosi garresini* (Carrù, 1962), pp. 35-88.

¹³¹ *Ibid.*, pp. 54-56.

¹³² On Pico's *Compendio* and the latter additions to it by Pietro Martire Morelli, O. P. see Amedeo, *op. cit.*, pp. 80-86. Other manuscripts of this work not listed by Amedeo will be given in Appendix A. As to the date of composition of the work, we read, for example in ms. Conventi Soppressi B. VIII. 1648 of the Biblioteca Nazionale in Florence, on the final page, "... Pensando dunque che questo basti, farò fine infino a questa hora, nella quale scorre l'anno di sua vita quadragesimo settimo et io del mio sestagesimo tertio, il quale e di Christo nato 1532 ..."

two other minor works. The first is *Insulae suae descriptio*, a poem dedicated to his son Giantommaso; the second, *Depulsoria calumniae romaniensis oratio* is Pico's defense against the Roman Curia, who had forced him to pay a large sum of money owed for Julius II's taking of Mirandola in 1511. Neither of these two was published during his lifetime.

Also in 1524 he dedicated a dialogue *De adoratione* to Pope Clement VII; this work survives but has never been published. In 1531, under the editorship of Lilio Gregorio Giraldi, another edition of his hymns appeared at Bologna. In this edition, besides the poems that had already appeared in print, were published for the first time five new religious hymns. In the same year he wrote a will; this proved to be of no value since his property was eventually confiscated by his nephew Galeotto.

During these last years, Gianfrancesco corresponded with the prominent humanist Jacopo Sadoletto, a man he had known earlier as the secretary of Leo X;¹³³ with Lodovico Nogarola of Verona;¹³⁴ and with Alessandro Minuziano,¹³⁵ the Milanese printer. In general, however the extant correspondence from his later years is very meager, probably mostly having perished with Gianfrancesco himself.¹³⁶

The end finally came on October 16, 1533, when his nephew Galeotto II Pico with forty armed men broke into the castle of Mirandola, murdered Gianfrancesco and his son Alberto, sacked the castle, and imprisoned the other members of the family.¹³⁷ Gianfrancesco's body was presumably buried without a marker¹³⁸ and still today no monument exists for him at Mirandola or elsewhere.

¹³³ A letter from Sadoletto to Pico is dated November 24, 1530 and refers to an earlier letter written to Pico which is lost. See *Iacobi Sadoleti . . . opera quae extant omnia* (Verona, 1737-38), I, pp. 72-73. The letter granting Gianfrancesco the privilege of establishing a press at Mirandola (see above note 120) was written by Sadoletto.

¹³⁴ There is copy of a letter from Gianfrancesco dated July 27, 1531 and of Pico's letter in defense of Dionysius made by Nogarola himself in Laurenziana, Ashburnham 279, fols. 21r-29r.

¹³⁵ MS Braidense AD.IX. 3r, fols. 149, 155^r, 162 contains three letters from Minuziano to Pico from 1519 to 1521. See Carlo Dionisotti, "Notizie di Alessandro Minuziano," *Miscellanea Giovanni Mercati* (Vatican City, 1946), IV, pp. 327-72, esp. pp. 347-48.

¹³⁶ Other letters from the period 1520-1533 are from Giovanni Manardo (in Manardi, *op. cit.*, pp. 217-18), dated December 27, 1524, and those from Celio Calcagnini (in Calcagnini, *op. cit.*, pp. 104, 106-07, 111-12). We also know that Pico was in Bologna in February, 1530 for the coronation of Emperor Charles V. See Gaetano Giordani (ed.), *Della venuta e dimora a Bologna del sommo pontefice Clemente VII per la coronazione di Carlo V Imperatore celebrata l'anno MDXXX. Cronaca con note, documenti ed incisioni* (Bologna, 1842), part I, pp. 93, 139.

¹³⁷ Details of the episode can be found in Cron An, pp. 79-82; Papazzoni, pp. 125-26; Cron Mod II, IV, pp. 316-17; and Alessandro Luzio, *Un prognostico satirico di Pietro Aretino* (MDXXXIII) (Bergamo, 1900), pp. 8, 64-66, which utilizes unpublished documents.

¹³⁸ It seems as though his body was found in Mirandola in 1834, when excavations were made in the church. See the note in Papazzoni, p. 166.

As our brief sketch indicates, the life of Gianfrancesco Pico is primarily the story of a minor nobleman's efforts to retain his little principate against the wishes of the rest of his family. What distinguished Pico's story, however, from that of hundreds of other petty princes of the Italian Renaissance are his religious devotion and his scholarly interests. Such energies as he could spare from his struggle to retain his hold on Mirandola he devoted to a defense of Christianity. Among the principal enemies of Christianity in his view were the various pagan philosophies which had been resuscitated in the revival of classical learning. It is as a defender of Christianity against these philosophies that the prince of Mirandola becomes a figure in the history of philosophy.

CHAPTER II

GIANFRANCESCO PICO'S GENERAL ATTITUDE TOWARD PHILOSOPHY

Obsecro te, non sit honestior philosophia gentium, quam nostra Christiana, quae una est vera philosophia, quandoquidem studium vel amor sapientiae significatur hoc nomine.

Augustine, Contra Julianum, IV 72.

Our major emphasis in this study will be a consideration of Gianfrancesco Pico's attack upon Aristotle and the Aristotelians as expressed in his major work, the *Examen Vanitatis Doctrinae Gentium*. Implicit and explicit in Pico's critique are certain attitudes toward empirical science and the theory of knowledge which are characteristic of at least one important trend of sixteenth century philosophy. As we hope to be able to show, Gianfrancesco's critique, while built on a series of premises which represent one of the more conservative trends of Renaissance philosophy, actually utilizes certain techniques of criticism and raises certain specific objections which will ultimately prove to have far-reaching effects in early modern philosophy. Consequently, this author cannot be characterized simply as medieval or modern. Rather, in him, we find a strange mixture of both elements. His general orientation was certainly traditional – one might even say reactionary. On the other hand, some of the questions which he raised in connection with Aristotelian philosophy, were again raised by a Bruno, a Patrizi, a Galileo, or a Gassendi. Regardless of whether Pico was "medieval" or "modern," the *Examen Vanitatis* stands out as one of the more interesting philosophical documents of the sixteenth century.

Besides the polemic against Aristotle and the many ties that it had both with the past and the future, certain other elements of Pico's thought are not without interest. We can ask other questions about his philosophy. Why did he undertake his extensive critique of Aristotle? Why did he attempt to discredit philosophy in general? What were the sources from which his inspiration came? How did his attitude toward

philosophy develop during his lifetime? All of these are worth taking up before our discussion of his consideration of Aristotle and the Aristotelians.

In order better to be able to evaluate Pico's polemic against Aristotle, we shall briefly go into some of these questions, before turning to the central concern of our study. We shall, first of all, analyze briefly several key doctrines of the two men who influenced him most profoundly, Giovanni Pico and Girolamo Savonarola. Then, we shall trace our author's own intellectual development, emphasizing his changing attitude toward the desirability of pursuing secular knowledge and toward the role which secular knowledge has in the life of the Christian.

(1) *Giovanni Pico*

Certainly the closest intellectual tie that Gianfrancesco Pico had early in his life, during the formative years, was with his famous uncle.¹ The letters which passed between the two Picos indicate the extent to which Giovanni took an interest in the intellectual and spiritual formation of his nephew. And it was Gianfrancesco, who, after the death of his uncle, saw to the publication of his *Opera* and composed a biography of him.

Apparently during the last few years of his life (1492-94) Giovanni Pico came increasingly under the spell of Savonarola. His writings from this period generally show a somewhat changed outlook, a more ascetic and religious, and a less intellectual, interest. Gone, to a large extent, are the aspirations of the eighties, when the elder Pico was engaged in such ambitious projects as preparing his famous disputation to be held against all comers (planned for 1487) and his program for a *pax philosophica* (conceived already in the early 1480's but left unfinished at his death). Gone, too, is the desire to compose a *Platonis Aristotelisque concordia* or a *Theologia Poetica*. In place of the strong desire for secular learning and philosophical disputation, is a much greater emphasis on scriptural study and on living the sort of life advocated by Savonarola.

¹ We cannot here mention all of the important literature on Giovanni Pico. The following are basic to the study of the elder Pico and further bibliographical indications will there be found: Eugenio Garin, *Giovanni Pico della Mirandola: Vita e dottrina* (Florence, 1937); *idem*, *La cultura filosofica del Rinascimento italiano* (Florence, 1961); *idem*, *Giovanni Pico della Mirandola* (Parma, 1963); E. Anagnine, *Giovanni Pico della Mirandola* (Bari, 1937); Pearl Kibre, *The Library of Pico della Mirandola* (New York, 1936); E. Monnerjahn, *Giovanni Pico della Mirandola: Ein Beitrag zur philosophischen Theologie des italienischen Humanismus* (Wiesbaden, 1960); *L'opera e il pensiero di Giovanni Pico della Mirandola nella storia dell' Umanesimo* (Mirandola: 15-18 settembre 1963) (Florence, 1965).

This shift in emphasis will help us to understand the difference between Giovanni's earlier attempt to find truth in all philosophy and Gianfrancesco's basic opposition to philosophy as a whole. It will become increasingly apparent as we proceed that certain aspects of Giovanni's later attitude nourished Gianfrancesco's youthful mind. These seeds developed and ultimately sprang forth in the comprehensive world-view we find in the *Examen Vanitatis*. One might almost say that the philosophical position which reaches maturity in the *Examen Vanitatis* is nothing other than a logical progression from that which was expressed more and more clearly during the last few years of Giovanni Pico's life.

Nowhere is such an outlook more concisely and illuminatingly expressed than in the letter from Giovanni Pico to his nephew, dated May 15, 1492.² Basically pious in tone, there is little in this letter to hint that the author is one of the most learned men of his time and one whose name will become for future generations a symbol of wide learning and genius. The way to heaven is difficult, the uncle admonishes his nephew, and many are the traps to ensnare the unwary. The desires of the flesh, the devil, and a deceiving world (*fallax mundus*) can lead one astray.³ But, great will be the victory for the Christian when these things have been overcome and he attains the Beatific Vision.

The role of reason in religion is touched on but once in this letter and certainly not in the way that one might expect to hear a philosopher speak of it. Giovanni Pico here regards reason as somehow identifiable with God and natural law. The path to heaven must be sought out, he continues, but for this he does not advise the study of philosophy and theology, as we might have expected the author of the *Oratio*, the *Conclusiones*, and the *Apologia* to do. Rather, two quite different ways are recommended to overcome the world and Satan, alms and prayer.⁴ There is no specific mention that the intellect can lead to religion, nor that philosophy should be cultivated. It is suggested only that Scripture

² The text of this letter is printed in the 1601 edition of Gianfrancesco Pico's *Opera*, pp. 817-19. I follow, however, the recently edited text in Eugenio Garin, ed., *Prosatori latini del Quattrocento*, pp. 824-33, where it is accompanied by an Italian translation.

³ "Quantum illud potius esset miraculum si tibi uni inter mortales sine sudore via pateret ad caelum, quasi nunc primum et fallax mundus et malus daemon esse desineret, aut quasi tu in carne adhuc non esses, quae concupiscit adversus spiritum et, nisi salutis nostrae vigiles perspexerimus, circacis ebrios poculis in prodigiosas brutorum species illecebrosa deformat." *Prosatori latini* . . . p. 824.

⁴ "Tu vero, fili, contende intrare per angustam portam, nec quid multi agant attende, sed quid agendum ipsa tibi naturae lex, ipsa ratio, ipse Deus ostendat . . . Erunt autem duo praecipue praesentissima tibi remedia adversus mundum et Satanam . . . eleemosyna scilicet atque oratio." *Ibid.*, p. 830.

be read. The nephew is exhorted to have it "always in your hands" and to give no time to reading frivolous poetry and fables.⁵

The viewpoint that is emphasized in this letter later becomes incorporated in Gianfrancesco's own philosophical writings – in even a more exaggerated form. The *mundus fallax* of which Giovanni spoke becomes central in Gianfrancesco's critique of Aristotle and in his rejection of all rational forms of inquiry into natural knowledge. The suggestion to turn to Scripture is reiterated often by the nephew, appearing at the end of each book of his *Examen Vanitatis*, as well as elsewhere.

(2) *Girolamo Savonarola*

A second major influence on the intellectual formation of Gianfrancesco Pico came from his close contact with Girolamo Savonarola. Of Gianfrancesco's relation to Savonarola and of his concern with the Ferrarese friar's cause even after his death we have already spoken. Here we shall merely try to trace certain of Savonarola's key attitudes and show how close approximations of these later found their way into the younger Pico's own thought.

Girolamo Savonarola is a man most difficult to characterize in a few words. Many are the contrasts and contradictions in his own writings and even more are those among the historians who have tried to interpret him. Arguments over his merit or lack of it raged unabated during the last years of his life, continued after his death, and, even today, continue as though it were still a living issue. Here we shall not discuss the wider meaning of the man's life and work, but shall merely try to characterize briefly his attitude toward philosophy and worldly learning.⁶ In this, as well as in certain of his pious and otherworldly attitudes toward religion, is to be found a clear connection with certain outlooks and emphases given ample expression in the works of Gian-

⁵ "... suggeret et sacra lectio, quam ut omissis iam fabulis nugisque poetarum semper habeas in manibus etiam atque etiam rogo. Nihil Deo gratius, nihil tibi utilius facere potes quam si non cessaveris litteras sacras nocturna versare manu, versare diurna." *Ibid.*, p. 830. This is in contrast with an earlier Giovanni Pico who had written vernacular poetry and a commentary on a love poem of Girolamo Benivieni and who had proposed a work entitled *Theologia poetica* (see Giovanni Pico della Mirandola, *De hominis dignitate, Heptaplus, De ente et uno*, ed. Eugenio Garin (Florence, 1942), p. 150).

⁶ The Savonarola literature is enormous and we cannot begin to discuss it here. For a discussion of his own philosophy and his attitude toward philosophy, the arts and sciences, see Pasquale Villari, *La storia di Girolamo Savonarola e de' suoi tempi*, New edition (Florence, 1930) I, pp. 95–113; Giuseppe Schnitzer, *Savonarola* (Milan, 1931) II, pp. 337–78. (This is the Italian translation which contains additions not found in the original German version); Eugenio Garin, "Ricerche sugli scritti filosofici di Girolamo Savonarola. Opere inedite e smarrite," *La cultura filosofica* . . . , pp. 201–12. For further indications see the annotated bibliography in Mario Ferrara, *Bibliografia savonaroliana, Biblioteca di Bibliografia Italiana*, XXXI (Florence, 1958).

francesco Pico. Although Savonarola did not always show a consistent attitude toward reason and learning, certain of his basic opinions are clear. It seems evident, for example, that in his view, human reason has very little place in religion. This is made apparent in the First Book of his treatise *De simplicitate vitae Christianae*.⁷ Here he says:

Moreover, if the Christian life should proceed from the natural light of reason, (since those things which the Christian believes and loves and for which he works could not be proven by reason) it is necessary to say that he would have opinion regarding these things and not science. Moreover, opinion is a habit of the mind which does not render the mind perfectly firm for assent.⁸

Fra Girolamo continues by arguing that if faith came from natural light it would not rise above the status of mere opinion. Furthermore, in that case God's love would have no role to play in religion. This leads him to the conclusion that, "Ergo necesse est dicere quod ab alia radice quam a ratione procedat."⁹ A very similar attitude is expressed in the *Trionfo della Croce*¹⁰ where he focuses upon faith as a "gift of God (Ephes. II, 8-9)." Furthermore, Savonarola contends that faith cannot be demonstrated from natural causes and reasons alone, but is dependent upon God's will.¹¹

Certainly these notions are by no means original with Savonarola, but follow the orthodox Christian trends, although we might say that the emphasis on the non-cognitive nature of religion is rather pronounced. This emphasis becomes more evident when he speaks out in the Book IV of the *Trionfo* against the religion which philosophers can reach. He here insists that the Christian religion is a unique source of truth.¹² His attitude becomes clearer when he contends that "The

⁷ The work dates from about 1496. See Lucia Giovanozzi, *Contributo alla bibliografia delle opere del Savonarola: edizioni dei secoli XV e XVI* (Florence, 1953), pp. 34-39. I use the following edition: Girolamo Savonarola, *De simplicitate Christianae vitae*, ed. Pier Giorgio Ricci, vol. 7 of the national edition (Rome, 1959).

⁸ "Praeterea si vita Christiana procederet a lumine naturali rationis, cum nulla ratione probari possint efficaciter ea quae Christianus credit et amat et pro quibus operatur, necesse est dicere, quod de illis opinionem habeat non scientiam. Opinio autem est habitus mentis qui non perfecte firmat animum ad assensum." *De simplicitate* I, 5, pp. 25-26.

⁹ *Ibid.*, I, 5, p. 27.

¹⁰ This work was written in 1497. See Giovanozzi, *op. cit.*, pp. 123-26. It was composed in Latin and translated by the author himself into the vernacular. I follow the Latin text given in Girolamo Savonarola, *Triumphus Crucis*, ed. Mario Ferrara, vol. 8 of the national edition (Rome, 1961). See Serafino Prete, "Savonarola apologist: il Triumphus crucis," *Studia picena* (Fano), XXI (1952), pp. 1-51.

¹¹ "Licet autem fides ex causis principisque naturalibus demonstrari non possit, ex manifestis tamen effectibus validissimas rationes adducemus, quas nemo sanae mentis inficiari poterit. Non quod fides his tantummodo innitatur, cum, teste Apostolo, 'donum' illa sit 'Dei non ex operibus, ne quis gloriatur' (Ephes. II, 8-9) . . ." *Trionfo*, p. 3.

¹² In the *proemium*, *ibid.*, pp. 208-09. He here seems to be speaking out against the attempt at a reconciliation of the ancient religions and philosophical traditions such as we find in Giovanni Pico's youthful works and in Ficino. See Bohdan Kieszowski, *Studi sul platonismo*

religions which were transmitted by the philosophers were full of defects and errors." The philosophers are condemned for attempting to discover the end of human life through the use of reason, for the natural light of reason is completely insufficient for the achievement of man's well being. The efforts of the philosophers to define religion do not lead to something stable, but to a religion which is uncertain, imperfect, and full of errors.¹³

Such an outlook will be taken over with little change, as we will see, by Gianfrancesco Pico. The latter will merely apply his erudition to this basic principle and will then discourse at great length about the uncertainty and imperfection of the philosophy and religion of the *gentes*. In Savonarola's eyes these early philosophies and religions are by no means a preparation for Christianity, as Ficino or the younger Giovanni Pico thought. Rather, they are quite the opposite, full of internal conflicts and contradictions. Christianity alone is a stable and unchanging body of truths.

Savonarola also argues that secular learning is insignificant, compared to the teachings of the Scriptures. In fact, in his view other branches of knowledge are quite useless and there is little reason to cultivate them. Sacred Scripture far surpasses all other forms of knowledge. This is clearly expressed in a sermon to the Florentines of August 15, 1496:

La scienza adunque, che è bene dell'anima, è molto maggiore beneficio che non sono tutte le cose terrene. Tra le scienze adunque di Logica, Filosofia, Metafisica ed altre scienze, la maggiore di tutte è quella della scrittura sacra . . . Tra'doni della intelligenza, quel dono che fa l'uomo più propinquo a Dio, è maggiore d'ogni altro tal dono: ma la intelligenza delle scritture sacre, massimamente quando a quella è congiunto il lume della fede, fa più propinquo l'uomo a Dio quanto allo intelletto, che ogni altra cosa. Adunque è maggiore dono e maggior beneficio quanto alla intelligenza che l'uomo possa avere.¹⁴

del Rinascimento in Italia (Florence, 1936), pp. 113-27; Garin, *Giovanni Pico . . .* (1937), pp. 73-89. Savonarola also had a strong aversion to Platonism - more than Aristotelianism, it seems. For a general survey of this movement see Charles B. Schmitt, "Perennial Philosophy: From Agostino Steuco to Leibniz", *Journal of the History of Ideas*, XXVII (1966), pp. 505-32. See Garin, "Ricerche sugli scritti . . ."

¹³ Especially in Book IV, chap. 2, "Religiones a philosophis traditas defectuum et errorum plenas fuisse." *Trionfo*, pp. 212-20. On pp. 217-18 we read the following: "His igitur et huiusmodi circumveniuntur difficultatibus, qui per rationem naturalem humanae vitae finem investigare volunt; ideoque patet nil stabile ac certum de religione diffinire philosophos potuisse, cum circa huiusmodi positiones in ambiguo semper in tenebrisque versentur. Si quam ergo religionem unquam staterunt, aut aliquando statuent, imperfectam incertamque, ac errorum plenam esse oportet . . . Sed cum illi [i.e. the philosophers], ut dictum est, in multis deficientes erraverint, patet naturalis lumen rationis ad hominis salutem satis non esse."

¹⁴ *Prediche di F. Girolamo Savonarola* (Firenze, 1889) per cura di Giuseppe Baccini, pp. 399-400.

From the few passages analyzed here we can gather some indication of Savonarola's attitude toward secular learning as compared to faith and Scripture. In short, faith is a free gift of God and reason has no role in its attainment. The religions of the non-Christians and of the philosophers are not approximations to the truth or preparations for it, as not only Giovanni Pico and Ficino, but also St. Thomas had held. They are, instead, perversions of the truth. They are religions "imperfect, uncertain, and full of errors." Finally, all science, all knowledge, is subject to that knowledge afforded by Sacred Scripture. Other kinds of knowledge may lead to some good, but certainly the results they give are in no way to be compared to the results obtained from the study of the Scriptures.

We could trace these ideas through the thought of Savonarola with greater precision, but our major concern here is not with the friar's philosophy. Rather, we shall now turn to our analysis of Gianfrancesco Pico's general philosophical outlook, giving special attention first to his attitude toward the relation of religion and philosophy, for this was certainly one of the central philosophical problems with which he concerned himself. In so doing we shall see that in his solution to this problem he treats a number of other philosophical problems that are of no small interest. His polemics against philosophy in general and against Aristotelianism in particular are outgrowths of his solution to this main problem. And it is that question in which we are primarily interested.

(3) *The Solution Worked Out in the "De Studio" (1496)*

We shall first look at Gianfrancesco Pico's early work, the *De Studio Divinae et Humanae Philosophiae*, which has a dedicatory letter from 1496 and which was first printed in 1497.¹⁵ In this work, written already before Savonarola's death, we find indications of close ties to the friar in an attitude toward philosophy that will be given expanded treatment in the *Examen Vanitatis* two decades later.

In the *De Studio* our author clearly distinguishes "human" from "divine" philosophy. The former encompasses those branches of philo-

¹⁵ The first printing was at Bologna in 1497 (HC-13002) and it was reprinted in the editions of the *Opera* at Strasbourg in 1506-07 and Basel 1572-73 and 1601. I shall follow the text in the last of these, where it is printed on pp. 1-28. This edition, *Ioannis Francisci Pici, Mirandulae Domini . . . Opera quae extant omnia . . .* (Basel, 1601) will be used for all further references to the writings of Gianfrancesco Pico unless otherwise stated. I will cite book and chapter of the various works, in addition to page number. This will facilitate reference to other editions. I have not hesitated, however, to utilize the earlier editions to emend the text of difficult passages.

sophy which do not specifically focus on God and upon his attributes, e.g. natural philosophy and logic. If these parts of philosophy do tell us something about God, it occurs only secondarily. Human philosophy takes its starting point from the materials of sense experience, which – as we shall much more fully see below – cannot and does not give us reliable knowledge. This type of philosophy is doomed to failure from its very beginning, according to Pico, for it does not take its starting point from God. Divine philosophy, on the other hand, begins with God and can furnish us with reliable knowledge. This type of philosophy is based on the Sacred Scriptures, which are the word of God, and which present to us the Truth in its proper order. The Scriptures teach us about God and this is far more important than the knowledge about natural things which human philosophy gives us. Furthermore, this second type of philosophy concerns itself with nothing other than that which is divinely revealed, that is, with Eternal Wisdom.¹⁶

Pico's separation of the two is clear cut. What he calls divine philosophy is in actuality nothing other than what we would call study of the Scriptures; what he names human philosophy is everything which falls into the category of secular learning, e.g. the arts, sciences, and various branches of philosophy. After making the basic distinction, our author continues by analyzing further the two philosophies, their relation to one another, and the extent to which it is desirable for the Christian to devote himself to human philosophy. Just how far human philosophy can be considered useful is one of his primary considerations.

We shall show that the end of human philosophy is put to its proper use only in the attainment of divine philosophy, which surpasses it in all regards.

¹⁶ "Nos autem humanam appellandam censuimus, tum quod humano ad Deum gradu promovet, hoc est, initio et adminiculis sensuum, tum quod paucula quaecumque de Deo rimata est. Sacrae vero literae, quae divina philosophia vere nominatur, retrogrado procedunt ordine. Nam et a Deo exordiantur, et in Deum finiunt, et semper de Deo loquuntur, nihilque pertrahunt quod ad ipsius cultum in hac vita, et in alia ad fructum non pertineat, nec humano ingenio comprehensae, sed revelatae divinitus, ut ad veram aeternamque sapientiam, quae nihil aliud est quam Deus, perveniremus." *De studio, proem.*; p. 3. See Antonio Corsano, *Il pensiero religioso italiano* (Bari, 1937), pp. 54-64.

The distinction between human and divine philosophy seems to have a long history which has not been studied to my knowledge. Cicero (*Tusc. Disp.* IV, 26, 57) says, "... sapientiam esse rerum divinarum et humanarum scientiam cognitionemque ..." See the note on the history of this distinction in ancient times in the edition of this work by T. W. Dougan and R. M. Henry (Cambridge, England, 1934), II, p. 167 and also Seneca, *Ep.* LXXXIX, 5; Plutarch, *De placitiis philosophorum*, 874E. Thomas Aquinas makes a distinction similar to Pico in the *Summa contra gentiles*, II, 4, when he uses the term "humana philosophia" repeatedly and contrasts it "sapientia divina." He concludes, "Et ideo interdum ex principiis philosophiae humanae sapientia divina procedit ..." There are, of course, significant differences between Thomas' distinction and that of Pico. What we want to emphasize here is merely that the distinction is not original with Pico. A distinction similar to Pico's was later made by St. Lorenzo da Brindisi. See Silvestro da Valsanzibio, *Una nuova opera di S. Lorenzo da Brindisi: il commento sulla "Sacra filosofia della natura" di Mosè* (Rome, 1963), pp. 23-35.

Then we will prove that our endeavor is purposeless unless we use the one as well as the other for arriving at the contemplation and love of God.¹⁷

Throughout his treatise Pico expresses the opinion that human philosophy is but of limited value. It is not to be studied for its own sake, but is to be pursued only when it is of positive value as an aid in the understanding of divine philosophy. It is basically good in itself, although it can also easily be misapplied for evil purposes. Human philosophy *may* be useful for the Christian in achieving his end, but not necessarily so.¹⁸

There are several reasons why human philosophy may be of little use or even absolutely harmful for the Christian. First of all, it places a strong emphasis on sense knowledge, and such knowledge is not always reliable.¹⁹

Although barely mentioned here in Pico's early work, this will become one of his favorite themes and will be discussed in minute detail in the *Examen Vanitatis*. This aspect of the limitations of human philosophy is not here insisted on with great persistence, but it is worth noting that Gianfrancesco already has his doubts regarding the reliability of knowledge gained from sense experience.

In the *De Studio* he frames the major part of his polemic in somewhat different terms. Although philosophy and the liberal arts may be of limited use to the Christian, they are in no way to be considered as *necessary* for salvation. Nowhere in the Scriptures are they mentioned as being a prerequisite for beatitude.²⁰ In fact, certain of the arts and sciences can be positively harmful. Physics, logic, and metaphysics have some value as an aid to the study of Scripture; but geometry,

¹⁷ "Monstrabimus finem eius non recte poni nisi in adeptione divinae, quae illam numeris omnibus supergreditur. Demum probabimus inanem esse conatum nostrum nisi tam hac quam illa ad Dei contemplationem, et amorem capessendum usi fuerimus." *Ibid.*, *prooem.*; p. 4.

¹⁸ "Cum autem ostenderimus philosophiam ipsam seu veri scientiam bonam esse per se, et quispiam forte compererit eam, quae revelata est (ut Thomas Aquinas aliique permulti docent) esse necessariam Christiano ad capessendam felicitatem; poterit idem ambigere an etiam ea quam humanam dicimus, utpote ab homine inventam et per naturae vestigia procedentem ad beatitudinem comparandam sit necessaria." *Ibid.*, I, 2; p. 7. Cf. Thomas Aquinas, *Sum. Theol.*, Ia, q.1, a.1.

¹⁹ "De ea tamen cognitione loquimur, quae a sensibus trahit originem, nec ordinem discendi nobis congenitum supergreditur, quo solo nisi superno illo lumine fuerimus collustrati, perfectam et exactissimam intelligentiam non assequemur." *Ibid.*, I, 2; p. 7. See also note 16 above.

²⁰ "Patet itaque quadamtenus prodesse humanas scientias conducibilesque esse nobis non proprie necessarias ad beatitudinem. Alioquin Deus nobis perfecta dogmata non tradidisset, et in monstrando nobis coelesti itinere aberravisset. Cum nullibi mentionem fecerit, oportere eos, quibus supernae Hierosolymae ostium aperietur, liberales artes seu primam aut naturalem philosophiam percalluisse . . ." *Ibid.*, I, 2; p. 7.

arithmetic, and poetry have little if any affinity to scriptural studies. Poetry, in particular, is singled out as being deleterious to Christians unless it is cautiously approached, for the pagan poetry is often obscene. Pico concludes that it definitely should not be cultivated by the Christian. This is not to say that there are no good Christian poets, but there are far too few when their influence is compared to that of the great pagan poets.²¹

Even those arts and sciences which have some affinity to the Sacred Scriptures are only of limited value. They are certainly not to be studied by all Christians, for not everyone can pursue them without in some way endangering his faith. Certain teachings of the philosophers such as the Aristotelian doctrine that the world is eternal or Alexander's and Averroes' position on the unity of the intellect are apt to cause a weakening of their faith.²² On the other hand, the study of the arts and sciences can be helpful for certain persons. Philosophy, for example, must be studied by medical men, theologians, and teachers of philosophy. Physicians must be well acquainted with natural philosophy if they are to practice their healing art; those who study theology find that the understanding of divine things is easier when approached through a knowledge of natural things. Teachers of philosophy must study the subject if they are to teach it to the physicians and theologians.²³ Human philosophy is also beneficial to Christianity in certain other ways, for it may be helpful in refuting false doctrine or heresy, in the cultivation of sacred eloquence, or in the understanding

²¹ "Hoc autem diligenti consideratione pensandum, esse quasdam philosophiae partes, quas sacris literis aliis conducibiliores sunt et cognatiores atque idcirco Christiano homini prae caeteris excolendas, ei praesertim qui se ad divina eloquia transferre cupit. Alias minus, quales videntur geometrica, arithmetica, et poetica: non enim eam cum divina Scriptura quasi dixeris affinitatem habent, quam et physica habet et logica et methaphysica . . . Sed quid est detestabilius plerique poetarum turpitudines maximas et obscenitates suis versibus immiscuerunt, quae Christiano homini non modo atrectanda, sed prorsus eliminanda." *Ibid.*, I, 6; pp. 13-14. Among the Christian poets who are considered suitable are Prudentius, Sedulius, and Damasus and of the more recent ones Battista Mantovano, Ludovico Bigi Pittorio, and Ugolino Verino. On Pico's attitude toward poetry in general see Bernard Weinberg, *A History of Literary Criticism in the Italian Renaissance* (Chicago, 1961), pp. 255-57. For his relations with Battista Mantovano and Ludovico Bigi Pittorio see the preceding chapter, pp. 13-14. See also his letter to Ariosto (*Opera*, pp. 384-85) and note 16, p. 14.

²² *De Studio* I, 5; p. 12.

²³ "Illud quoque animadversione dignum trifariam dari opportunum aditum ad philosophiam: Aut medicinae percellendae gratia; aut docendi in scholis ipsam philosophiam, aut theologiae noscendae . . . His ergo omnibus licere per philosophiae campos vagari manifestum est. Medicus enim a philosopho principia et fundamenta haurit medicinae multaque mutuatur, quibus ad conciliandam aegrotis sanitatem utatur. Ei vero qui theologiam perdiscere cupit, facilius ad id quod quaerit accessus patet ope philosophiae, quando per res naturales quasi gradu facto ad divina conscendimus. Eum autem qui docere et enarrare philosophorum libros instituit, manifestum est in eis ipsis versari oportere." *Ibid.*, I, 5; p. 13.

of the sacred writings.²⁴ Even though a knowledge of these subjects is sometimes useful and even desirable for those who are engaged in combatting heresy and rooting out false dogma, this is not always the case. A study of history will show us that heretics have never been convinced of their errors by the use of logic or by the persuasion of rhetoric. God does not save his people by the use of dialectic. Rather, the kingdom of God consists in a simple faith, in which arguments and disputes about words have no place.²⁵

In actuality, however, there are two separate ways to convince the heretics of their errors regarding church doctrine. As examples of these two approaches, Gianfrancesco cites the works of Giovanni Pico and Girolamo Savonarola. The former wrote learned works in a polished Latin style, whereas the latter wrote his works in a simple style or even in the vernacular for the benefit of the unlearned.²⁶ In spite of his great esteem for his uncle, for the enormity of his learning and the brilliance of his eloquence, Gianfrancesco is forced to conclude that Savonarola and many other eminent men like him demonstrate that a wide knowledge of secular learning is not necessary for the Christian. When the Christian has the Scripture, "it is necessary to borrow neither the knowledge of things nor eloquence from the pagans."²⁷ Christianity alone is self-sufficient.

Still, despite all of the pitfalls that must be avoided in the use of the human philosophy and the fact that it is not necessary for the Christian, certain aspects of it have a somewhat more positive contribution to make. It can lead one from a less noble consideration of the things of the world to a contemplation of what Plato called "the highest being."

²⁴ "Quantum vero pertinent ad confutanda falsa dogmata, ad eloquentiam discendam, ad sacra eloquia facile intelligenda, quibus muneribus obeundis, gentiliū literas utiles diximus," *Ibid.*, I, 7; p. 15.

²⁵ "Sed percurramus historias veteres actaque eorum qui cum haereticis pugnare inspicimus, Ego, ut de me fatear, numquam legi, nec arbitror invenitur qui legerit ullum unquam haereticum vi aut logicae devictum aut rhetorices persuasum haeresim abiurasse, ita ut in ipso disputationum conflictu manus dederit et mutarit sententiam . . . Non in dialectica placuit Deo salvare populum suum. Regnum Dei in simplicitate fidei est, non in contentione sermonum." *Ibid.*, I, 3; p. 9.

²⁶ This discussion of Giovanni Pico and Savonarola is found in *De Studio* I, 7; pp. 16-18. About Giovanni we read for example: "Libri disputationum adversus Astrologiam omnem laudem superant sive doctrinam spectes novasque philosophiae quaestiones ab eo enucleatas sive eloquentiam (p. 17)." About Savonarola, we read: "... ex Epitomate, quod Hieronymus Savonarola vir celeberrimus conscripsit et vernacula lingua ut inruditis opem ferret (p. 17)." The two writers are neatly compared by saying "Interim quod Ioannes Picus pro doctis et Latina lingua pollutibus, quod Hieronymus Savonarola pro rudibus Latini sermonis effecerunt (p. 17)." *Ibid.*, I, 7; p. 18.

²⁷ "Quibus facile corrogari poterit, nec scientiam rerum, nec eloquentiam necessario nos a Gentibus mutuari." *Ibid.*, I, 7; p. 18. This seems to be written against both the scholastic philosophers who utilized pagan *scientia* and the humanists who utilized pagan *eloquentia*.

That is, it can lead us to God, the origin and cause of all beings.²⁸ But, even here where human philosophy reaches its highest value as an aid to the apprehension of God himself, it falls short of divine philosophy. Besides leading us to the contemplation of God, divine philosophy is also valuable in the formation of the faculty of religious understanding and in the development of the will; and these things far surpass that which is acquired through worldly pursuits. In addition, the Scriptures allow even the unlettered to understand God's teachings, thus opening to them the wonderful secrets of the faith. In brief, the study of Scripture brings to us all of the benefits of human philosophy and many more in addition. From the smallest excerpt taken from any of the books of the Bible all is available to the reader that can be taught by human philosophy. Each small part of Scripture grants to the reader that which he can grasp by virtue of his own capacity to know and understand.²⁹

In concluding this very revealing work, our author gives an example of the potency of the divine philosophy of the Scriptures. St. Francis became a very holy man, so high did he rise that his theology, as it were, transcended the heavens themselves. Yet this most holy man was not imbued with the commentaries of St. Thomas and Duns Scotus, who had not even been born at his time, but with the Scriptures.³⁰

Here is a most significant passage. It is not the philosopher or the theologian who is the Christian to be emulated, but the simple and pious man. Learning and study have dubious value at best. It is preferable by far for one to concentrate his efforts on studying the Scriptures.

We see that already in this early work Gianfrancesco Pico has made

²⁸ "Diximus utilem nobis esse utranque philosophiam, si ea uti voluerimus, non abuti; nam humana ope ex ignobili omni entium consideratione quasi gradu facto per scalas ad ens (ut inquit Plato) ipsissimum. Hoc est, Deum entium originem et causam, quamvis ascendere rerum naturae ordinem speculantes; divino vero adiumento et haec eadem et multo maiora sublimioraque cognoscimus." *Ibid.*, II, 7; p. 27.

²⁹ "Mira profecto Divinae Scripturae profunditas, stupendus ordo, quando non solum per Bibliae ordinem discurrentes, ex quibuscunque libris summas in Deum contemplationes erucere possumus; sed nec est cuiuscunque libri tam parva portio ex qua non detur (modo simus capaces) excerptere quicquid docet humana philosophia; addita etiam num magna religionis capessendae formandaeque voluntatis facultate et hoc postremo munere mundi superatur sapientia, nec aliquod tam parvum in ea caput reperire possumus (si modo in ea aliquid parvi) quod nos ad Dei cognitionem elevatos non illuminet et illuminatos accendat. Caeterum ut etiam meminimus, in Divinis eloquiis hoc praeceptum quod ad intelligentiam ineruditorum se demittunt, adeo ut miros arcanosque sibi ex eis intelligentiae haustus accumulent." *Ibid.*, II, 8; p. 28.

³⁰ "Notum illud de beato Francisco a theologis quibusdam prolatum, eius videlicet theologiam coelum transcendere, suam autem humili gradu reptare terram. Quam tamen vir divinus et Christi amore mirum in modum flammatus non de commentariis Thomae aut Scoti, qui nondum nati fuerant; sed de divinis literis divino amore examinatis eruerat." *Ibid.* II, 8; p. 28.

clear his position, a position that will gain greater definition in the *Examen Vanitatis*. All knowledge is divided into two classes, divine knowledge and human knowledge. The former, which is based on the indisputable truth of Scripture is good *per se*; the latter, which is built up from purely human resources and takes no account of revelation, is neither completely good nor bad in itself. It can be beneficial if it is used to deepen and extend our knowledge or religion and theology or if it is utilized to defend the faith. On the other hand, it can be harmful if relied on excessively or if considered to be an end in itself. Human philosophy is not *necessary* for salvation. It can be useful, as it was for many of the Fathers, but men such as St. Francis of Assisi rose to great holiness without its benefits. Even the apostles themselves who followed Christ were simple men (*idiotae*), for the most part fishermen.³¹

(4) *The First Three Books of the "Examen Vanitatis" (1520)*

If in the *De Studio* Pico focuses upon the ambivalent character of human philosophy, pointing out its good and useful characteristics as well as its corrupting and useless aspects, he takes a somewhat different stance in the *Examen Vanitatis*. Here the importance of Scripture is still strongly emphasized. His attitude toward human philosophy changes somewhat, however. In the *Examen Vanitatis* it becomes difficult for our author to find anything good to say about the various arts and sciences of pagan learning. In fact, the entire work is conceived as a polemic against the philosophy of the *gentes*, which comes to have a meaning roughly similar to what was called human philosophy in the earlier work. He rebukes the various schools of pagan philosophy and the different arts and sciences as well. He singles out Aristotle for a particularly thoroughgoing analysis and refutation. This is primarily because the Stagirite's philosophy happened to be the predominant one in the schools of sixteenth century Italy. Philosophy in general is found to be a major source of error and Gianfrancesco discourses at length with great erudition, attempting to show that to base knowledge upon any foundation other than the revealed Scriptures is foolhardy and self-deceiving.

At least in part, this more severe attitude toward the *gentes* is derived from the sceptical notions found in the works of Sextus Empiricus, a fact that will become more evident as we proceed. Pico enlists arguments of the sceptic philosophers in behalf of Christianity. All of the

³¹ "Christum autem qui sequebantur Apostoli simplices fuere idiotae et plurimum piscatores: quod nemo est fere, qui nesciat." *Ibid.*, I, 3; p. 8.

arts, sciences, and philosophies can be challenged on the grounds set forth by the sceptics, Pico argues. As a result, only the divinely revealed truths of the Christian faith escape this criticism untouched.

The program which the author sets out for himself in the *Examen Vanitatis* is an ambitious one. Essentially it involves an attempt to discredit all knowledge, except that of the Christian Scriptures. It is a project which the author, who has already expressed a deep-seated mistrust of secular knowledge in the *De Studio*, undertakes with enthusiasm and vigor:

Not only against the depraved religion or superstition of the pagans, but also against the teaching, with which that superstition itself is encased, I have taken it upon myself to speak, to examine all of the sects of philosophy, and to weight them in a balance, as it were. This is so that I will be able to demolish, as far as I can, every root and the fibres of this great vanity, which has spread itself forth beyond measure during our own age.³²

The *Examen Vanitatis* was first published in 1520, but the original idea of composing the work probably dates from somewhat earlier.³³ As we have said, the first three books of this work are an attack on pagan philosophy and learning in general and the last three specifically criticize Aristotelian philosophy. We shall now briefly summarize some of the more important ideas found in these first three books before turning to a more detailed study of Gianfrancesco's critique of Aristotle.

Our author begins by praising truth in a way that belies the sceptical character of the rest of the work. In reading the first few sentences of the Preface, one feels as though he is reading an Aristotelian treatise. Indeed, there are reminiscences of the first lines of the *Metaphysics* when we read, for example, "Humanum ipsum genus ad hanc veritatem natum, eiusque capessendi suapte natura desiderio exaestuans..."³⁴ But, we soon see that the author's intent is far different

³² "Ego vero, non solum contra gentium religionem pravam superstitionemve, sed contra doctrinam, cuius ambitu illa ipsa etiam clauditur superstitio, dissolvere institui, et omnes philosophiae sectas sub examen revocare, et tanquam in libra appendere, ut omnem omnino radicem, fibras omnes huiusce vanitatis, quae nostra aetate plus nimio pullulavit, quibus potero viribus excindam." *Ex. Van., proem.*; p. 474.

³³ According to the Preface to Book III (pp. 600-01), Pico intended to express his views a good deal earlier, but his varying political fortunes (see the previous chapter for a discussion of this) prevented him from doing so. When the *Examen Vanitatis* did finally see the light of day it was printed at Mirandola's recently established press. A papal privilege from Leo X, dated April 10, 1519 (in Pico's *Opera*, ed. cit., fol. a22^r) gave to Gianfrancesco the right to publish his works and those of his uncle. The *Examen Vanitatis*, however, was the second and last book to issue from this short-lived press. It carries a dedication letter dated July 13, 1520, addressed to Leo X (ed. cit., p. 880). The work is reprinted in the *Opera* of 1572-73 and 1601. It was completed, although perhaps not in the form in which it ultimately appeared, by 1514. See below, Appendix A, p. 193.

³⁴ *Ex. Van., proem.*; p. 473.

from a vague praise of truth. To him truth means but a single thing. It is the truth of religion, and of a single religion, Christianity. There only, truth must be sought; to look elsewhere is vain. The term *vanitas* has a prominent place in the title of the work and it is a word which Pico uses time and again to describe the search for truth directed elsewhere than toward the Christian Scriptures. The vanity of the pagans lies in accepting superstition in place of religion, incertitude in place of certainty, and falsity in place of truth.³⁵ They have, in short, accepted false criteria for the determination of the true. They search for truth where a *sincera veritas* cannot be found. As our author says further:

As to religion, we will call that vain, which has a depraved beginning, vain and fallacious middle terms, and a conclusion that does not really follow. Vain can also be said and held with reference to other things when something does not yield what it promises and offers ambiguity for certainty. Likewise vain is that which introduces the false under the appearance of the true.³⁶

The author's endeavor in the *Examen Vanitatis* is to show systematically that not only the other religions, but also the various philosophies, arts, and sciences are vain. He will argue that all knowledge which takes its origin from a source other than Scripture is, if not false, at least extremely susceptible to error. He also argues that the various philosophies, arts, and sciences of the *gentes* carry little weight, for there is almost universal disagreement among the various sects of philosophers. In so doing Gianfrancesco Pico displays an enormous erudition and a detailed knowledge of a very wide range of sources of philosophy, the arts, sciences, and religion. He utilizes not only the commonly known sources, but numerous little known sources, including a number of works that had not yet been printed.³⁷

The First Book of the *Examen Vanitatis* is devoted principally to

³⁵ "... quod equidem non difficulter posse fieri arbitror, si universam gentium doctrinam, superstitione, incertitudine, falsitate, labare, hoc ipso quod in manibus habemus, opere monstraverimus; ut enim veritas est religionis, ita superstitionis est vanitas, et si verum dixisse probamus, cum certo a nobis ea patefiunt quae certa esse nos ostensuros recepimus, ita vanitatis arguemur si et pro certis incerta, et pro veris falsa tradidisse deprehendamus." *Ibid.*, *proem.*; p. 473.

³⁶ "Quare quod attinet ad religionem, vanum id appellabimus, quod pravum habet initium, vana et fallacia media, finemque minime consequitur. Quo ad alia etiam vanum et dici et haberi potest, id quod non stat promissis et pro certo praebet ambiguum. Vanum item, quod veri specie praetenta, falsum inducit." *Ibid.*, *proem.*, p. 473.

³⁷ In the Preface (p. 475) are mentioned the following commentators on Aristotle, whom he will use: Alexander, Porphyry, Ammonius, Philoponus, Leo Magentinos, Simplicius, Theodorus Metochites, Joseph Rhacendites, Michael of Ephesus, Michael Psellos, Georgios Pachymeres, Sophonius (Sophonias?), Iamblichus, Damascius, Dexippus, Olympiodorus, Syrianus.

pointing out disagreements among different schools of philosophy. We can look at any branch of philosophy, Pico contends, and we do not find the various schools in fundamental agreement. The various sects do not differ merely in words, as Antiochus of Ascalon had held, but there is a genuine lack of concord among the ideas of the various thinkers. This discord has lasted through many centuries and shows no signs of abating. There have been disputes among the leaders of the different sects and even among the disciples of the same master. These disagreements are not confined to a small area, but they encompass all branches of philosophy and learning.³⁸ Many are the examples that our author gives of the conflicts. He takes, for example, an issue such as the divisions of philosophy, gives the differing views that have been expressed by philosophers concerning this question, and argues that it is hopeless to attempt to reconcile these widely divergent viewpoints.³⁹ After discussing a number of such instances he concludes that the whole philosophy which has been formulated by the *gentes* is marked by internal inconsistency and discord. Instead of these having been resolved in time, they have only become more pronounced through the centuries.

Furthermore, these disputes which have occurred among the pagans are also responsible for some of the arguments and disagreements that have arisen among Christian theologians. The teachings of the faith are true, but when the theologians attempt to combine them with certain of the teachings of philosophers, difficulties arise. For example, there is the question of whether or not the world is eternal that has arisen since the introduction of Aristotelian philosophy. Such a question, which causes discord and strife, certainly does not come from the teachings of the Bible, but from the philosophy of the *gentes*.⁴⁰ The strife that has sometimes been evident within the ranks of the Christian theologians is reducible ultimately to the doctrines that they have absorbed from pagan learning.⁴¹ For Pico, there is and can be no basic

³⁸ "At quanta illa quaeso et quam multiplex et quam interminata discordia? Vidimus enim quamquam nec omnes dissensiones collegisse fateamur, nec ipsis in dissensionibus enarrandis uno modo scribant auctores, quam et magna est, et quam multiplex variarumque ambiguitatum foeta dissensio. Vidimus sectarum principes et consecratos et in universum, et per partes dissidisse." *Ex. Van.*, I, 20; pp. 533-34. Similar passages can be found elsewhere without difficulty. For example see the chapter titles of Book I (printed together pp. 467-68).

³⁹ *Ibid.*, I, 3; pp. 487-88.

⁴⁰ "Sed undenam hae manarunt discordiae [i.e. concerning the eternity of the world]? Certe non ex Moyse aut duodecim Prophetis quod meminerim, nec quod sciam ex Evangelio; at ex philosophis gentium prodire praesertimque de Peripateticorum doctrina fluxere, qui adeo locuti sunt ambigue, ut eorum ex dictis quisque propriam confirmare sententiam sategerit." *Ibid.*, I, 11; p. 503.

⁴¹ This is developed more fully in Book IV. See our chapter III, pp. 73-74.

disagreement on matters of religion. Heresy and error have entered into the history of Christianity because of the adulteration of the Scriptures with pagan learning or because through vanity some have turned away from the truths of the faith.

We might ask how Gianfrancesco came to criticize secular learning so vehemently. Even in the *De Studio*, his attitude was not quite so negative toward learning as it appears in the *Examen Vanitatis*; and, in the *De Imaginatione* (1500),⁴² he even treated a specific problem in basically Aristotelian terms. He has become definitely more critical toward non-Christian learning by the time the *Examen Vanitatis* was completed.

Gianfrancesco gives us at least a partial answer to this in the preface to Book III.⁴³ The Greek painter Apelles, our author narrates, when he became angry because after repeated attempts he could not accurately paint the foam in a horse's mouth, hurled his sponge at the painting. The resulting impression of the sponge left a most excellent representation of foam.⁴⁴ A similar thing happened to our author, he avers, for he was long doubtful whether he should write down his opinions on pagan philosophy, for he did not wish to be judged a censorious person or one overbold. But, "stimulated by public utility and the love of truth," he undertook the task.⁴⁵ Its completion, however, has taken a long time, for he has been forced to interrupt his work many times.

But once our author has decided to put his views down on paper and has been granted the leisure to do so, he does not waste much time on peripheral matters, but turns immediately to the task at hand. In doing so he must diverge from the intentions expressed by his beloved and esteemed uncle, who had attempted to bring into concord the divergent strands of the philosophical tradition. Regardless of what his

⁴² On this work see our discussion below chapter III, p. 57 and chapter IV, pp. 97-100.

⁴³ pp. 600-01.

⁴⁴ This anecdote appears in several ancient writings. Pico probably took it from Sextus Empiricus, *Outlines of Pyrrhonism* I, 12, 28-30; *Sextus Empiricus*, Loeb ed. by R. G. Bury (Cambridge, Mass., 1933-49), I, pp. 18-21. All further page references to Sextus Empiricus will be to this edition, unless otherwise noted. Sextus uses the story here in much the same way as Pico uses it.

⁴⁵ After relating the story of Apelles, our author continues, "Ita mihi magna ex parte in re dissimili contigisset si dicerem, iure fortassis non culparer, quanquam non casui quod sum dicturus, sed et certis causis et divinae demum providentiae acceptum referri volo. Fueram ego diu animi dubius si quae de philosophia gentium concepissem, an chartis committere deberem et aliis legendum tradere. Movebant me hinc inde multa, et quod non defuturos zoilos arbitrarer, et quod audacius factum qui carperent suboriri multos, coniectura plusquam mediocri deprehendebam. Sed stimulabar et publica utilitate et amore veritatis urgebar, quae cacteris propendere proculdubio fas est." *Ex. Van.*, III, *proem.*; p. 600.

uncle had tried to do, Gianfrancesco sees it as incumbent on himself to point out the wide divergence of philosophical traditions. And, more important, he sees it as his task to demonstrate that Christianity is unique, having little if any resemblance to other religions and philosophical systems.

In the interpretation [of philosophy] there are diverse sects, diverse leaders, although there was Giovanni Pico, brother of my father Galeotto. He, by his genius, memory, indefatigable study, his singular learning, his preeminent eloquence in writing of the highest things, has gained the wonder and admiration of the men of our time. Whereas it has been believed that this could be accomplished by others more than it has been proven, he promised (and would have carried out his promise) to reconcile the teachings of Aristotle and Plato. But this task has been believed by many to be most difficult, even to the present day, and by some even to be beyond the grasp of human ability. It occurs to me, however, that it is more proper and more useful to render the teachings of the philosophers uncertain than to reconcile them as my uncle wished to do. For, I prefer to follow in this matter those ancient theologians of our faith who held that some action must be taken against the pagan philosophers and that their teachings must be demolished. This I prefer to philosophizing from pagan teachings, as some who have cultivated doctrinal studies in later centuries have done; although, of these later thinkers there are some who have agreed with the teachings of the earlier theologians.⁴⁶

This statement is clear enough. Not only did Gianfrancesco, like Apelles, finally decide to give up in his quest to do the impossible (i.e. to reconcile the philosophies of the *gentes* with one another and with Christianity), but he decided to act in direct opposition to the program of his eminent uncle. The attempt of the *Concordia* of Giovanni is cast aside and the polemical outlook of the *Adversus Astrologiam* and the pietistic view of the letter of which we have spoken above become central directives for Gianfrancesco's endeavors. Besides his uncle's later views and the tradition which Savonarola sums up, the other

⁴⁶ "... in quo interpretando diversae sectae, diversi duces, quanquam extitit Ioannes Picus Galeotti patris mei frater, qui et ingenio et memoria et indefesso studio et doctrina singulari et praecellenti inter scribendum de rebus maximis facundia, nostri temporis hominibus et admirationi fuit et stupori. Hic quod ab aliis fieri posse creditum est magis quam probatum et pollicitus fuerat et servasset, hoc est, Aristotelis et Platonis dogmata conciliare, quod negotium ad praesentem usque diem multis difficillimum, nonnullis etiam supra humani caput ingenii creditur esse. Mihi autem venit in mentem consentaneum magis esse et utile magis incerta reddere philosophorum dogmata, quam conciliare, ut patruus volebat. Sequi enim in hac re malo antiquos illos ex nostra fide theologos qui in gentium philosophos potius agendum duxere et eorum excindenda dogmata, quam ipsorum ex dogmatis philosophari nonnullorum more, qui seculis posterioribus doctrinae studia percoluerunt, quanquam et inter hos fuerunt, qui prioribus illis accesserint." *Ibid.*, I, 2; p. 486. Also see our chapter III, pp. 61-62 for a similar statement and Charles B. Schmitt, "Gianfrancesco Pico's Attitude toward his Uncle," in *L'opera e il pensiero di Giovanni Pico della Mirandola* . . . , II, pp. 305-13.

major source from which the younger Pico drew inspiration was the writings of Sextus Empiricus. Sextus' works, as they have come down to us, form the basis of our knowledge of ancient scepticism. They are largely a compilation of the various teachings and opinions of the sceptical schools from the time of Pyrrho of Elis (ca. 360–275 B.C.), the originator of the movement, to the time of Sextus himself (ca. 160–210 A.D.); Sextus adds little new material to the tradition but from all indications transmits accurately what went before him.⁴⁷

Gianfrancesco Pico seems to be the first to have given serious consideration to Sextus' writings after the end of Greek philosophy.⁴⁸ Precisely from which manuscript Pico studied the works of Sextus is a question that we have not yet been able to resolve. He says several times, however, that he does not know of a translation of Sextus.⁴⁹

Regardless of what his source was, Pico came to have quite an extensive knowledge of Sextus' compilation of ancient scepticism from whom he quotes often, and whose teachings he discusses at length and applies to the philosophical questions which he considers.⁵⁰ In fact, of the six books of the *Examen Vanitatis*, only the last shows little influence from scepticism. Books I, II, and III are predominantly devoted to reproducing Sextus' arguments against the various ancient sects of philosophy. Books IV and V apply the sceptical doubts concerning the validity of philosophical knowledge to the system of Aristotle.

⁴⁷ On ancient scepticism see Raoul Richter, *Der Skeptizismus in der Philosophie* (Leipzig, 1904), vol. I; Victor Brochard, *Les sceptiques grecs*, 2nd ed. (Paris, 1923); Léon Robin, *Pyrrhon et le scepticisme grec* (Paris, 1944); Mario dal Pra, *Lo scetticismo greco* (Milan, 1940).

⁴⁸ For a brief discussion of the revival of scepticism during the Renaissance and the knowledge of it during the Middle Ages see below our chapter VI, pp. 160–61, 167. References for further details will be found in the notes to these pages.

⁴⁹ For example, *Ex. Van.*, I, 10; p. 500 "... uti ex Sexto philosopho et Theodorito ... et quoniam libri horum auctorum omnibus noti, quia in Latinam linguam nunquam fuere (quod sciam) conversi, sed et Graeca quoque illorum exemplaria rarissima haberentur." There are but two extant Latin translations that it seems likely that Pico may have seen and both are fragmentary. The first is Venezia, Biblioteca Marciana, Lat. X. 267 (3460). This manuscript contains substantial parts of the three books of the *Outlines of Pyrrhonism* and very brief extracts from certain of the other works (usually only a page or two). The second manuscript is Vaticano latino, 2990. This translation is attributed to Giovanni Lorenzi of Venice (15th century) and contains the six books *Against the Professors*. For further information on the manuscripts of the writings of Sextus Empiricus see note 28 p. 167 in our chapter VI below.

⁵⁰ In *Ex. Van.*, I, 2; p. 485 he says, "Decem et ego Sexti septici libros perlegi, qui etiam empirica scripsit monumenta, idemque dictus empiricus." Just what these ten books are we do not know. He mentions the *Outlines of Pyrrhonism* often (II, 21, p. 560; III, 11, p. 642, etc.), but also speaks of the *Contra Logicos* (II, 34, p. 588; II, 35, p. 591), the *Contra Physicos* (III, 7, p. 624; III, 11, p. 642; III, 12, p. 642), the *Contra Arithmeticos* (III, 7, p. 624), and the *Contra Ethicos* (III, 13, p. 648). The extant writings of Sextus include the following: *Outlines of Pyrrhonism* (3 books); *Against the Dogmatists* (5 books comprising: *Against the Logicians*, in 2 books; *Against the Physicists*, in 2 books; and *Against the Ethicists*, in one book); and *Against the Professors* (6 books dealing with grammarians, rhetoricians, geometers, arithmeticians, astrologers, and musicians).

These latter two books we will discuss in detail below when we consider the critique of Aristotle. The first three books of the *Examen Vanitatis* closely follow the arguments of Sextus himself. Groups of thinkers such as the logicians, astrologers, mathematicians, and grammarians are criticized along the same lines as those set out by Sextus. Often Pico follows the *Outlines of Pyrrhonism* nearly word for word, translating some passages directly from the Greek and incorporating them into the text of the *Examen Vanitatis*.⁵¹ But along with this he adds other material derived from the experiences of himself and others⁵² or from the writings of other authors, ancient or modern.⁵³

In addition to the critique of the arts and sciences and of the various philosophical schools, which he draws from Sextus, our author also carefully considers what the Empiricist had to say about the all important question of the criterion by which a judgment can be made. Book II of the *Examen Vanitatis* is completely devoted to a discussion of the criterion and of the sceptic "modes," which essentially are arguments evoked to show that a reliable criterion or standard by which knowledge is to be judged as true or false does not exist. As we shall see, Pico's emphasis on this doctrine is not without purpose, for it will be a major rallying point when he undertakes to discredit Aristotelian science in Book V. Since our author's treatment of these questions is important, not only for understanding his own philosophical position, but also for understanding the nature of his arguments against the Aristotelians, we shall consider what he says in some detail.

Gianfrancesco begins Book II by considering the problem of the criterion. The word itself, which in Greek is *κριτήριον*, is carefully considered. It must not be translated merely as judgment, Pico insists,

⁵¹ As he specifically says in *Ex. Van.*, II, 21; p. 560, "Scepticos apud antiquiores, decem sive modi sive loci sive typi, ad assensum cohibendum custodiebantur, de quibus mentionem facit in Pyrrhone Diogenes, sed nec explicat eos, nec eo utitur ordine quo Sextus in primo πυρρωνίων ὑποτυπώσεων quem nos magna ex parte, quantum ad hoc praesertim attinet, secuti et ex Graecis ipsius libris transferemus; et aliis ex authoribus addemus, quae opportuna et consentanea rei, de qua agimus, videbuntur." As examples of how closely he follows the Greek text of Sextus at certain places compare the following: *Ex. Van.*, II, 21; p. 560 and *Out. of Pyrr.*, I, 14, 36-39; vol. I, pp. 24-27; or *Ex. Van.*, II, 22, p. 560-64 and *Out. of Pyrr.*, I, 14, 40-58; vol. I, pp. 26-37. See our comparison in Appendix B.

⁵² See *Ex. Van.*, II, 23; p. 565, where he speaks of several examples drawn from his own experience, which show the variability of the temperaments and senses. Also interesting is pp. 566-67 where he discusses the differences of the people of the New World as compared with Europeans. On Pico's early discussion of the Spanish discoveries see Adolf Schill, *Gianfrancesco Pico della Mirandola und die Entdeckung Amerikas* (Berlin, 1929) and Margaret Munsterberg, "Early Allusion to America," *Boston Public Library Quarterly* III (1951), pp. 165-67.

⁵³ For example in II, 22, pp. 560-64, which is almost completely derived from Sextus (see note 51). But, along with the examples which are copied from Sextus, others are included from Pliny (p. 562) and Jacopo da Forlì (p. 563).

for it is the instrument of judging rather than the judgment itself. Thus it is best translated as *iudicatorium*, in the same way as the Scholastics have used the term *sensorium* to refer to the instrument of sensing. Therefore, whenever we speak of this (i.e. of the instrument of judging) we use the term *iudicatorium* to refer to it, for by it is understood that by which something is judged; and, furthermore, it can also mean the *locus* by which an argument or disagreement is resolved.⁵⁴

Our author then follows very closely what Sextus said regarding the criterion, presenting his arguments in what amounts to a direct translation from the *Outlines of Pyrrhonism*,⁵⁵ although he does add a few embellishments of his own. There are basically three types of criteria: (1) anything which is used in perception, as the senses, (2) anything which grasps or measures something by use of an art, e.g. a ruler or compass, and (3) anything which brings us to a clearer cognition of something, i.e. the rational standards⁵⁶ or criteria which the dogmatic philosophers use. This latter can in turn be divided into three classes. These are the agent, the instrument, and the "according to which." The first of these, "agent," is, for example, man; the second, "instrument," is the mind or sense which is the instrument of judgment; the third, "according to which" is the *phantasia* or imagination, by which man is brought to pronounce his judgment.⁵⁷

Gianfrancesco goes on for many pages, basically repeating the arguments given by Sextus, but also adding additional arguments, to show that the ancient philosophers' various attempts to find a stable criterion for the discovery of truth were unsuccessful. The pre-Socratics, Plato and his school, the Pythagoreans, the Stoics, the Epicureans, Aristotle and the Peripatetics have all failed to overcome the obstacles which the Sceptics introduced. He, therefore, concludes that the philosophers have not yet found a reliable criterion of truth upon which judgments can be based.

Although such a criticism takes away the foundation on which the

⁵⁴ "Occurrit autem primo veritatis κριτήριον quod dicitur a Graecis, cuius vice iudicatorium transferimus potius quam iudicium, verbum reddentes verbo. Ut enim Peripatetici Latini aesthithirion apud Aristotelem, transferunt sensorium et etiam instrumentum sentiendi; ita et criterion, iudicatorium vertamus, et instrumentum iudicandi sive locum iudicii. Quare semper cum de criterio erit mentio iudicatorii utemur nomine et instrumentum quo fit aliquod iudicium dabitur intelligi et etiam locus quoque modo, in quo causa sive lis iudicatur." *Ex. Van.*, II, 1; p. 537. For a comparison of Pico's translation of this term with those used in the earliest printed translations of Sextus, see our discussion below in chapter VI, pp. 168-70.

⁵⁵ II, 3, 14-17; *ed. cit.*, I, pp. 160-63.

⁵⁶ Called by Sextus τὸ λογικὸν κριτήριον, by Pico *rationale iudicatorium*.

⁵⁷ Besides II, 1; pp. 537-38 see II, 20; p. 558 where Pico describes the three rational criteria in greater detail.

various philosophical schools base themselves, Pico argues, it does nothing whatever to damage the principles upon which the Christian religion is based. These principles upon which Christianity is based do not depend on man or on his sense, imagination, or inventiveness, but on divine revelation. They are not established by the materials of sense experience, but by the light of faith and by miracles, which neither the sceptical critique nor any other critique can touch. Such is the strength of the divine truth and of the Christian doctrine that human arguments can in no way affect them. On the other hand, the pagan philosophies which are mere human inventions, can be completely demolished by such a critique.⁵⁸

Here is one of our author's clearest statements of his philosophical orientation.⁵⁹ The traditions of the different philosophical schools do not offer truth, for all of their systems are susceptible to the criticisms given by the sceptics, which demolish the very basis of rational human knowledge. The Christian religion, by virtue of the fact that it is not a human, but a divine philosophy, rises above these criticisms and stands firm against the man-made arguments.

After his ample discussion of the criterion, our author turns to a lengthy treatment of the "modes" or *loci* by which the sceptics suspend judgment.⁶⁰ These he treats in largely the same terms as they were dealt with by Sextus, but again introduces some material from other sources. Certain of these modes, such as the first and second, which deal with the wide variety of characteristics found in different animals and in different men, play a central role in his critique of Aristotle.⁶¹

⁵⁸ "Neque enim nostrae principia fidei pendent ab homine, sed ab ipso Deo, nec sensu habentur aut phantasia aut humana inventione, sed revelatione divina; nec experimentis artium sensibilibus, sed fidei lumine stabiliuntur et prodigiis atque miraculis, in quae nec argumentari valide possent, aut Pyrrhon aut Sextus aut quivis alius philosophorum, quantovis ingenio, quantavis copia literarum. Tanta enim divinae veritatis vis, ut quaecunque in eam oppugnandam parentur arma retundantur atque resiliant, quare non ad nostram doctrinam, hoc est, Christianam, quae praestantior et modis omnibus sublimior est, sed ad gentium philosophiam quae humanitus inventa est vel demoliendam vel infirmendam, Sceptica consideratio potest conducere, quorum finis erat ex suspensione iudicii nullo pacto perturbari." *Ex. Van.*, II, 20; p. 559.

⁵⁹ Clear also are the opening words of chapter 37 of Book II, p. 597, "Sine lite autem sacrae utriusque divini testamenti literae, ex quibus nostram, id est, Christianam disciplinam petimus, ubi sine dissensione veritas, sine vago et anxio discursu et unius Dei cognitio et plurium abdicatae superstitiones deorum et vana pugnantiisque quibus ad felicitatem existimabant Philosophi iter patere, dogmata refutata."

⁶⁰ *Ibid.*, II, 21-31; pp. 560-78; cf. *Outlines of Pyrrhonism* I, 14-16, 36-179; vol. I, pp. 24-103.

⁶¹ See *Ibid.*, II, 22-23; pp. 560-67 and compare it with his critique of Aristotle based on the variability of sense experience which is found at V, 2-3; pp. 695-707. Also see our discussion of this in chapter IV, pp. 86-96. For the proximity of Pico's presentation to the original of Sextus, see above note 51 and Appendix B.

In his discussion of these things in Book II Pico directs little attention toward the shortcomings of Aristotelian epistemology, but largely concentrates on presenting to his readers a faithful statement of Sextus Empiricus' arguments. We have seen that our author leans heavily on Sextus' writings in his attempt to destroy the validity of the various philosophical systems. From his considerations, Pico has concluded that the lack of reliability found in the pagan literature makes Christianity stand out all the more obviously as the unique source of *sincera veritas*. But, what, we might ask, was Pico's own opinion of Sextus and the sceptical philosophy? Did it have any other merit than that of serving the purely pragmatic function of reducing all non-Christian sources of knowledge to a hopeless mass of confused inconsistencies? He certainly does not seem to be willing to call himself a sceptic. On the other hand, however, he does not attack and abuse the sceptics with the same vehemence as he does certain other ancient schools of philosophy. The statement which comes closest to representing a more or less definitive attitude toward the Sceptics is the following:

Even if in many things I certainly do not approve of the sceptic philosophers, nevertheless, I do not disapprove of them up to a certain point; that is, up to the point that they diminish the arrogance of those who declare that they know and are in possession of all or at least most things . . . The sceptics refute those other philosophers who declare that they know something by virtue of human philosophy.⁶²

The Christian then should not particularly admire or follow the example of the sceptics. Still, to destroy the arguments of the other schools of philosophy by the sceptics' arguments can be useful. It gives one a starting point from which to begin the erection of an edifice of *sincera veritas* based on the Christian Scriptures. Basically, Pico subscribes to the *fides quaerens intellectum* formula of the Middle Ages and considers the mistake of the pagan philosophers to lie in the fact that they took their starting point in *intellectus* rather than *fides*. For him, the sceptic critique of philosophy has shown conclusively that the former cannot be a legitimate starting point, and, in writing the *Examen Vanitatis*, he hopes to convince his fellow Christians of this fact. So, in the final analysis, the sceptics furnish a useful method that is applicable to the conditions of his own time and for that reason he has studied it

⁶² "Quos quidem Philosophos Scepticos tametsi in plerisque non probo, eatenus tamen non improbo, quatenus eorum qui vel omnia vel plurima scire se tenereque profitebantur, arrogantiam obtunderent . . . Improbant alios philosophos sceptici, qui scire quicquam profitentur vi humanae philosophiae." *Ex. Van.*, III, 14, p. 654.

carefully and given it extended consideration in his work. To go beyond this and to say that Pico attempted to revive scepticism as an end in itself would be incorrect. It is merely an instrument to be used in the demonstration that the unique source of truth is found in Christianity and beyond this function it is of no interest to him.

(5) *Conclusion*

After making the distinction early in his career between human and divine philosophy, our author's more mature thought was given over to a further contrasting of the two and to an attempt to demonstrate that only divine philosophy is in possession of a legitimate criterion for determining the truth. The contrast between the human and divine is rooted perhaps ultimately in the writings of the Fathers, but was transmitted to Gianfrancesco from the more proximate sources of Girolamo Savonarola and from certain aspects of his uncle's later thought. The contrast between the two types of philosophy became more clear when a means of actually demonstrating the inept nature of human philosophy came into his possession. The instrument by which this became possible was the sceptical critique of all knowledge as transmitted in the writings of Sextus Empiricus. By the skillful manipulation of this tool, Gianfrancesco Pico was able to demonstrate to his own satisfaction that the foundation of human philosophy rests necessarily on the shifting sands of human intellect, imagination, and sense. This done, he can reassert with renewed assurance that "praebent . . . Sacrae literae multo firmitus quam Peripatetici aut alii ex Dogmaticis Philosophis sua proloquia."⁶³ But, because the predominant philosophical tendency which Pico saw around him was that of Aristotelianism, he felt compelled to make a special effort to show in a detailed way that this philosophy could not provide the same degree of certitude as could the Christian faith. It is with this aspect of his critique, which covers the last three books of the *Examen Vanitatis*, that we are here particularly concerned.

⁶³ *Ibid.*, III, 14; p. 654.

THE GENERAL ATTACK ON ARISTOTLE

Ego Aristotelem summo ingenio, doctrina, eloquentia, rerum peritia, prudentiaque et, ut semel dicam summum hominem, sed hominem tamen, fuisse puto.

Rudolph Agricola, De inventione dialectica, book I, chapter 3.

(1) *The Historical Context of Pico's Critique*

Gianfrancesco Pico is certainly not the first western philosopher to attack Aristotle. The long history of anti-Aristotelianism has yet to be written. Pico, as we might expect, draws extensively from his predecessors' criticisms of peripatetic philosophy. What must be considered significant about his long attack, however, is that it seems to be more comprehensive by far than any of the earlier anti-Aristotelian criticisms. Pico does not merely attack Aristotelian doctrine from a sceptic, Platonic, or Stoic point of view, nor merely from rhetorical-humanist considerations, nor only from the aspect of its incompatibility with Christian teaching, but combines all of these. The result is that Pico gives us an exhaustive compendium of anti-Aristotelian lore in the second half of his *Examen Vanitatis*.

Gianfrancesco Pico focuses his critique, as we shall see, on the basically doubtful character of all forms of natural knowledge. In large part, Pico's questioning of all knowledge not explicitly contained in the Scriptures derives from his reading of Sextus Empiricus; but this is not the only source from which our author drew. The critique extends much further than Pyrrhonic uncertainty. Along with his utilization of the then nearly unknown arguments of ancient scepticism, Gianfrancesco also extensively criticizes Aristotelian natural philosophy, primarily by introducing arguments from the writings of Hasdai Crescas and John Philoponus, other writers virtually unknown to European philosophers before Pico's discussion of their ideas. He also

owed much to Cusanus' "learned ignorance" and other aspects of northern mysticism as well as to Savonarola's Italian brand of anti-intellectualism. Various Scholastic currents such as Henry of Ghent's¹ careful consideration of the problems connected with obtaining a *sincera veritas* impressed him as did Valla's and others' critiques of Scholastic logic. He gained something, too, from certain of the objections raised against Aristotle's philosophy by the Peripatetics themselves and from the medieval Christian criticism of Bonaventure and others.

Pico's rejection of Aristotle stands at the threshold of the real struggle.² In the course of the century and a half after the publication of the *Examen Vanitatis* many were the polemics between Aristotle's defenders and his detractors. Nearly all aspects of the Aristotelian canon were called into question. The struggle cut across the lines of the intellectual disciplines: Humanism was pitted against Scholasticism, scepticism against dogmatism, the "new science" against the old, Catholicism against Protestantism, medicine against philosophy. In all of these controversies, and still others, the authority of Aristotle and the validity of his philosophy were the points at issue. Aristotle's cosmology was questioned by Copernicus, his physics by Galileo, his logic by Ramus. Philosophical thought gradually turned from his inspiration and a new era was hailed by Bacon and Descartes. But even then the controversy was not dead. Indeed, until the end of the seventeenth century and later, Aristotle's philosophy continued as an important influence in European thought.³

(2) *The Orientation of Pico's Critique*

Pico's extended critique of Aristotle, which occupies the last three books of the *Examen Vanitatis*, is divided into three major parts. Book IV is a general attack on Aristotelian philosophy (i.e. specific doctrines

¹ On Henry of Ghent see Charles B. Schmitt, "Henry of Ghent, Duns Scotus, and Gianfrancesco Pico on Illumination," *Mediaeval Studies*, XXV (1963), pp. 231-58.

² Here we can mention only several of the more prominent examples of later attacks on Aristotelian philosophy. Among them are Petrus Ramus' (1515-72) *Aristotelicae Animadversiones*, first printed in 1543 and often reprinted thereafter; Francesco Patrizi's (1529-97) *Discussiones Peripateticæ*, printed, 1571-81, and Pierre Gassendi's (1592-1655) *Exercitationes Paradoxicæ Adversus Aristoteleos*, first printed in 1624.

³ The tradition in Germany has been studied by Peter Petersen, *Geschichte der Aristotelischen Philosophie im protestantischen Deutschland* (Leipzig, 1921); Max Wundt, *Die deutsche Schulmetaphysik des 17. Jahrhunderts* (Tübingen, 1939); *idem*, *Die deutsche Schulphilosophie im Zeitalter der Aufklärung* (Tübingen, 1945). See also the general observations in William F. Edwards, "The Logic of Iacopo Zabarella (1533-1589)," (Ph. D. dissertation, Columbia University, 1960), pp. 323-53.

are not attacked so much as certain confusions and problems which surround the works). Book V is more specific. It attempts to invalidate Aristotle's theory of scientific demonstration. Finally, in Book VI, Pico criticizes specific errors of which he feels Aristotle has been guilty.

In the preface and first two chapters of Book IV, our author outlines his program. Aristotle's doctrines cannot be accepted as they stand. Certain of his followers have done this and have fallen into error,⁴ Pico argues. If they are to be accepted at all, the Aristotelian writings must be subjected to a careful and critical evaluation. They must always be accepted or rejected on the basis of the truth-value which they contain.

Therefore, I, who do not deny having learned many things from Aristotle and having gone through his books for about twenty years for the sake of coming to knowledge of the truth, should like to obtain the pardon of those who are now in our Church and who love and praise Aristotle too much; if I assert that his teaching, placed on a balance, as it were, and subjected to examination, does not have the weight which many judge it to have. If I show it is deprived of the end of philosophy, is uncertain and in many places false, may they excuse me and ascribe it rather to my love of truth and worship of piety.⁵

Pico restates his love of truth several times, emphasizing that he accepts Aristotle's teachings when they are true, but rejects them when they are false. He cites instances when he has done this. For example, in the short treatise *On the Imagination*,⁶ the Aristotelian position is generally followed.⁷ What our author objects to, is not the acceptance

⁴ "Vitia vero illius quae circumferri solent, alii non admittunt, alii quoquomodo possunt extenuare conantur," is how Pico expresses it. *Ex. Van.*, IV, *proem.*; p. 657.

⁵ "Propterea illud ego ab Aristotelis nimis amatoribus et laudatoribus qui nunc in ecclesia nostra vivunt libenter impetrarem, ut me qui ab Aristotele multa didicisse et viginti circiter annos eius volumina comperiendae gratia veritatis versasse non diffiteor, si eius doctrinam quasi libra appensam et diutius in examine versatam, non id habere ponderis quod plerique existimarunt assevero, si frustrari fine Philosophiae, si incertam, si plerisque in locis falsam monstravero, pariter excusent, potiusque id amoris ascribant veritatis et pietatis cultui." *Ibid.*, pp. 657-58.

⁶ This work was printed in a separate edition at Venice in 1501 by Aldus. An earlier edition at Rome (1500) is mentioned by Hain (1304) and other bibliographers, but neither Professor Caplan nor I have found a copy still in existence. The *De Imaginatione* is one of the few of Pico's works to appear in a modern edition. See Harry Caplan, *Gianfrancesco Pico della Mirandola On the Imagination* (New Haven, 1930). This is accompanied by a valuable introduction, notes, and an English translation by Professor Caplan. See our further remarks on this work in the next chapter.

⁷ In fact Aristotle is highly praised in several places in this work. For example, Aristotle's brilliant speculations on the imagination are praised and he is said to be the first to distinguish clearly imagination from sense, opinion, and the intellectual powers of the soul. "... Aristoteles quique eum secuti . . . , exquisitissimis speculationibus decernentes differre imaginationem a sensu opinioneque, atque ab intellectualis animae potestatibus, utpote quae propriam in animali sedem propriasque functiones sortiatur." Caplan, *op. cit.*, p. 26. Aristotle is also generally defended against his interpreters, Alexander and Averroes, in Pico's *Digressio de immortalitate animae*, completed by 1514 and published in 1523.

of whatever truth there might be in Aristotle, but the *blind* acceptance of Aristotle's philosophical teachings without further investigation. This latter position is attributed to certain of Aristotle's followers;⁸ but, such a position must be avoided, Pico argues, for we must always measure a philosophy by the truth which it contains.

Nothing has been more important to me than truth, which should be of greater importance for everyone than other things. I stand prepared not only to write against the works of Aristotle, but against my own as well, if I should ever find them to be in error. Am I greater than Augustine who retracted and corrected his writings which were already published? ⁹ . . . Or greater than Giovanni Pico ¹⁰ my own uncle . . . ? ¹¹

Even if he has elsewhere praised Aristotle or defended his teachings as being true, Pico asserts that he must here say that Aristotle's doctrine is not certain, but only probable. It is not wholly true, but in some parts false, not supported by religion, but weakened by superstition. Although Aristotle was perhaps the greatest of the pagan philosophers, he did not know the true religion.¹² Furthermore, Aristotle was vain:¹³ "I do not deny that there is much erudition in Aristotle, much elegance in his writings, perhaps even much truth, but certainly not a small amount of vanity . . ." ¹⁴ Gianfrancesco goes on to say that the Greek

⁸ What Pico is objecting to is perhaps best described by the following remarks, "... quia vel ita sese res habere videretur, ut ipse decreverat, vel quia tanta ferebatur eius autoritas, ut disquirendum eius de veritate doctrinae in sese non succurreret, neque enim philosophum sed philosophiae legem plerique omnes arbitrabantur." *Ex. Van.*, IV, *prooem.*; p. 658.

⁹ A recent and extensive discussion of the *Retractiones* is in Gustave Bardy's introduction to the edition, *Oeuvres de Saint Augustine*, 1st ser., vol. xii, *Les Révisions* (Paris, 1950), pp. 1-255. Also see John Burnaby, "The 'Retractiones' of St. Augustine: Self-Criticism or Apologia?" *Augustinus Magister: Congrès international augustinien* (Paris 21-24 septembre 1954), pp. 85-92 for a discussion of the meaning of *retractatio*, as Augustine used the term.

¹⁰ Giovanni Pico seems to have changed his position later in life, as we have tried to indicate in the preceding chapter, pp. 32-34. On these last years see Eugenio Garin, *Giovanni Pico della Mirandola: vita e dottrina* (Florence, 1937), pp. 37-48. Gianfrancesco Pico's *Vita* also emphasizes the change.

¹¹ "Nihil enim apud me potius fuit quam veritas, quae maioris apud omnes momenti debet esse quam caetera, pro qua non modo contra Aristotelem, sed contra mea opera scribere me paratum profiteor, si quando me deerrasse deprehenderem. An ego maior Augustino? qui retractavit et emendavit sua ipsius iam emissa scripta . . . An Ioanne Pico patruo maior? *Ex. Van.*, IV, *prooem.*; p. 658.

¹² *Ibid.*; p. 659. "... nam si laudavi alias aut defendi Aristotelem veritate duce, non tamen aut religiosam aut penitus certam aut omnino veram doctrinam eius asserui, sed innui saepe numero et quandoque etiam subsignavi certam non esse, sed probabilem, non veram omnino, sed aliqua ex parte falsam, non religione fultam, sed superstitione labefactam, utpote hominis et quanquam inter Gentes magni et forte maximi, hominis tamen, et verae lucis verae religionis ignari."

¹³ See chapter II, p. 45.

¹⁴ *Ex. Van.*, IV, *prooem.*, p. 658. Also see p. 660 and p. 663 where Aristotle's different "vanities" are explained. For example, "Prima igitur haec vanitas, quoniam et malum fuit initium, finis quoque malus, non vitae solum, sed ipsius doctrinae, quae ad bonum finem syncere non ducit; et intermedium quod docuit finis acquirendi non religio est, sed superstitio. Secundam

κενόφρων, an appellation given the Stagirite by Theocritus of Chios,¹⁵ is even sharper in tone than the Latin word *vanus*.

Although Aristotle discovered certain significant truths by the use of natural light, Pico argues, perhaps the knowledge of these truths is not original with him, but rather is derived from Plato and the Pythagoreans, who, in turn, learned them from Moses in Egypt.¹⁶ Thus our author again tries to argue that the Hebreo-Christian Scriptures are the unique source of Truth. Aristotle's contribution lies, not so much in the theoretical aspects of his philosophy, but in his extraordinary attention to detail and exhaustive experiments (*non tam doctrina, quam eximia cura, ac diligentibus experimentis*) which can be seen in the books on natural science.¹⁷

Pico outlines the method by which he intends to discredit Aristotle as follows:

When we have shown that in the previous centuries there has not been such a high esteem of Aristotle as now there is, we shall then show that his books which are held in the highest esteem are uncertain; that is, it is not certain whether or not we still have any book written by him. And even if this is conceded (that we do actually have one of Aristotle's books), it is still not clear that there is anything in these books which can be attributed to him without controversy. And, then with regard to the teaching itself, even if it is his and considered genuine and not forged and spurious, we will discredit it by the authority of his followers, by his way of writing, by the perpetual disagreement of his expositors, by the judgment of Christian Theologians of great name, by the viciousness of his errors, by the fallacy of sense, and finally by his own testimony.¹⁸

vanitatem monstrabimus, quoniam et si certa eius literarum monumenta, quae ducentur in controversiam, in eis tamen pollicetur certa, nec stat promissis, incerta videlicet et ambigua comminiscens, idque autoritatis compluribus et rationibus confirmatum iri volumus."

¹⁵ *Ibid.*, p. 658. Theocritus of Chios was a poet, contemporary with Aristotle. This quotation is found, for example in Diogenes Laertius, V, 11 (Loeb Edition, I, p. 454). On Theocritus in general see Pauly-Wissowa, *Real-Encyclopaedie*, 2nd ser., vol. V (1934), cols. 2025-27.

¹⁶ The notion that Plato came in contact with the Scriptures has a long tradition. Numenius (ca. 150-200), a Christian Platonist or Pythagorean, emphasized the close connection between Platonism and Christianity, calling Plato an "Attic-speaking Moses." This is cited by several of the Fathers, including Clement of Alexandria (*Stromata*, I, 22, 150) and Eusebius (*Praep. Evan.*, XI, 10, 14). It was often repeated in the Renaissance, e.g. by Giovanni Pico (*Heptaplus, proem.*, in Garin ed., pp. 170-72) and Ficino (*Theologia Platonica*, XV; *Opera* (Basel, 1576), p. 394).

¹⁷ *Ex. Van.*, IV, *proem.*, p. 659. Also see pp. 72-73 below.

¹⁸ "Quapropter ubi docuerimus non tantae prioribus saeculis fuisse quantae nunc est aestimationis Aristotelem, subinde aperiemus incertos esse ipsius libros, qui maximo habeantur in precio, hoc est, non constare adhuc, an ullum habeamus librum ab eo compositum. Quod et si concedatur, non liquere tamen aliquid esse eis in libris quod illi possit extra controversiam attribui. Inde ad doctrinam ipsam etiamsi eius sit et habeatur legitima, non supposititia et notha, infirmendam sumus progressuri, auctoritate sectatorum, scribendi modo, bello expositorum perpetuo, Christianorum Theologorum magni nominis iudicio, errorum pernicie, sensus fallacia, eius demum ipsius testimonio." *Ex. Van.*, IV, 1. p. 663.

This, in brief, is the procedure upon which Gianfrancesco Pico embarks in Book IV of the *Examen Vanitatis*. At least partially, his critique consists in what might be called a "humanist" criticism of the Aristotelian *corpus*, wherein the writings are criticized regarding their style, clarity, and *provenance*.¹⁹ Certain of these criticisms show Pico a rather astute classical scholar, having the same aversion to barbarous language and poor style as did the literary humanists. At the same time, he has the profound desire to establish a correct text of the author he is reading.²⁰ Other difficulties, which one encounters, are the seeming contradictions and disagreements among Aristotle's followers and commentators;²¹ the criticisms of the other schools of philosophy;²² the criticisms of Christian theologians, ancient and modern;²³ the philosophical errors of Aristotle;²⁴ the uncertainty of sense experience upon which the Aristotelian philosophy is based;²⁵ and, finally, the internal uncertainties found in the writings themselves.²⁶

Before embarking on his detailed consideration of each of these points, Gianfrancesco attempts to give a historical explanation for the increasing dependence on Aristotle as a source of philosophical inspiration in Europe.²⁷ The main lines of the Aristotelian tradition proceeded from the Greek to the Arab, and finally to the Latin world, he argues. But, whereas in the past a number of schools of philosophy have flourished and these were often more important than the Aristotelian, these traditions have to a large extent now been obscured by Peripatetic philosophy. It is further noted that the center of philosophy was at one

¹⁹ These criticisms are carried out in detail in chapters 4, 5, and 7 of Book IV; pp. 668-74, 676-78.

²⁰ As examples we can cite his concern for determining which works were actually written by Aristotle and which ones by his commentators (IV, 4; pp. 668-72), his concern for precision in translation (IV, 5; p. 674), or his concern with the textual variants in different versions of the *Metaphysics*, i.e. of the Aldus edition and of a manuscript of the work in the Library of S. Marco in Florence (IV, 5; p. 673). See below, note 44, pp. 66-67.

²¹ This criticism is expanded in chapter 6 and 8 of Book IV; pp. 675-76, 678-80.

²² This is considered in chapter 3, pp. 667-68.

²³ Ancient Christian criticism is dealt with in chapter 9 (pp. 680-83) and later Christian criticism is covered in chapter 10 (pp. 683-85).

²⁴ In chapter 11 (pp. 685-87), but a much more detailed attack constitutes the greater part of Book VI of the *Examen Vanitatis*.

²⁵ In chapter 12 (pp. 687-89). This, however, is merely a summary of the material in Book V, and to a certain extent of that in Books I, II, and III.

²⁶ In chapter 13 (pp. 690-91). This criticism of course focuses on texts such as *Nicomachean Ethics* 1094b 11-28, where Aristotle admits that certain of his teachings must be considered as only probable.

²⁷ "... Unde nam tanta illi facta fuerit autoritatis accessio ..." *Ex. Van.*, IV, 2; p. 664. The summary we give here is based on pp. 664-66.

time in Spain²⁸ but has since shifted to Paris.²⁹ Pico feels that the Aristotelian movement has gained momentum from two principal sources. First, there were the followers of Maimonides (whom Pico calls Moses Aegyptius), who attempted to explain the Old Testament by means of Aristotle's philosophy. This attempt, however, has been attacked by Hasdai Crescas,³⁰ an author upon whom Pico will depend heavily in Book VI for his attack on Aristotelian physics. Secondly, the high regard which Averroes and his followers had for the Aristotelian works has been of great moment in promoting the spread of Peripatetic philosophy. Particularly important, Pico holds, has been Averroes' vain opinion (*vana haec opinio*) that error could not be found in Aristotle. Averroes' commentaries on Aristotle are held in particularly high esteem by those who have gone from Italy to France to philosophize, according to Pico. There are some, however, he notes, who have turned aside from these commentaries, Duns Scotus being cited as one example.³¹ But, apart from a few such exceptions, it must be concluded that the highly regarded name of Aristotle has persuaded Italy and is influential also in France and Spain. There has been, however, a revival of interest in Plato during the pontificates of Eugenius IV (1431-47) and Nicholas V (1447-55), when Pletho, Bessarion, Nicholas of Cusa, and, later, Ficino began to place Plato before Aristotle. There are others as well who, although they esteem Plato less than Aristotle, realize that the former is closer to Christianity. This, according to our author is because Plato relied more on faith and less on reason than did Aristotle.

On the relation of Plato to Aristotle, Gianfrancesco makes the following very clear statement of his own position:

²⁸ This is presumably during the twelfth century when translators such as Joannes Hispanensis (fl. 1140), Dominicus Gundissalinus (d. 1151), and Gerard of Cremona (d. 1187) and philosophers such as Averroes (1126-98) were active in Spain. For a brief summary see C.H. Haskins, *Studies in the History of Mediaeval Science*, 2nd ed., (Cambridge, Mass., 1927), pp. 3-19.

²⁹ A good general summary of the introduction of Aristotelianism into the West is found in Martin Grabmann's article "Aristoteles im 12. Jahrhundert" in *Mittelalterliches Geistesleben* (Munich, 1956), III, pp. 64-128. For the development of Aristotelianism, particularly at Paris, see Fernand Van Steenberghen, *Aristotle in the West*, trans. Leonard Johnston (Louvain, 1955) and *idem*, *The Philosophical Movement of the Thirteenth Century* (Edinburgh, 1955).

³⁰ See Harry A. Wolfson, *Crescas' Critique of Aristotle* (Cambridge, Mass., 1929). Crescas will be discussed more fully in chapter V.

³¹ Pico has in mind *Opus Oxoniense*, prol., p. 3, q. 2, text 136 (Ioannis Duns Scotus, *Opera Omnia* (Vatican City, 1950f.), I, p. 93). Here Scotus turns aside from the method of Averroes in favor of that of Avicenna in his attempt to prove the existence of God. See Etienne Gilson, "Avicenne et le point de départ de Duns Scot," *Archives d'histoire doctrinale et littéraire du moyen âge*, II (1927), pp. 89-149.

Giovanni Pico, brother of my father Galeotto, as I have said in the First Book had taken on himself the conciliation of the two philosophies of Plato and Aristotle; and so great was the power and extent of his genius, so great was his learning that, unless he had been prevented by death, easily (in my opinion) the desire for this conciliation would no longer remain for those of the succeeding generations. I, however, to repeat what has already been indicated in the first volume, have not attempted in the previous books to reconcile the entire teaching of the *gentes*, but to invalidate it. However, in these [books] which follow, we shall invalidate [the teachings] of Aristotle so that following the example of the early theologians we may devote more study hereafter to the Sacred Scriptures, so that the truth of these writings, through human wisdom about the highest [things], might shine forth more and more.³²

Here Gianfrancesco makes a very definite break with his uncle's attempt at a *pax philosophica*. Giovanni's dream of a reconciled Plato and Aristotle is abandoned. Rather than attempting to show that all forms of philosophical and theological knowledge share a common basis, the younger Pico returns to the attitude of suspicion which we find in certain of the Church Fathers. There is a full scale de-emphasis of philosophical knowledge and an exhortation to turn to Scripture rather than to the writings of the philosophers for the discovery of the nature of God.³³ With this objective in mind – a mind nourished already by the humanist criticism of the Peripatetic philosophy and by the pietism of Savonarola – Gianfrancesco sees in the dominance of Aristotle the major obstacle to the realization of his purpose. Many Christians, he argues, are devoting too much attention to the writings of Aristotle and placing too much confidence in their reliability. Gianfrancesco feels that it is his task to dissuade them from this by pointing out some of the errors, uncertainties, and obscurities in the Aristotelian *corpus*. In reiterating what he has said before, he shows a certain optimism that his cry may not go unheeded. Referring certainly to the revival of Platonism mentioned above, he says, "There are some today who begin to open their eyes and think that they should proceed to better things; and they

³² "Joannes Picus Galeotti patris frater quod primo dixi libro utranque se conciliaturum philosophiam Platonis Aristotelisque receperat ac, ni morte praeventus fuisset, facile (ut arbitrator) eius rei desiderium posteris non reliquisset, tanta erat illius ingenii vis atque dexteritas, tanta doctrina. Ego vero, ut quae primo etiam sunt volumine indicata, repetam, non conciliare, sed infirmare universam gentium doctrinam tentavi libris superioribus, his autem qui sequuntur Aristotelem, ut maius inde studium sacris literis possimus impartiri exemplo veterum theologorum, ut earum quoque veritas literarum, humana sapientia de summo . . . magis, magisque resplendeat." *Ex. Van.*, IV, 2; p. 666. See Chapter II, p. 48 and note 46.

³³ This aspect of Pico's thought is perhaps best expressed in his early work, *De studio divinae et humanae philosophiae*, which was completed in 1496. See above pp. 37–43 and also the *De morte Christi* in *Opera*, pp. 29–73.

do not think that Aristotle should be esteemed so much as was customary.”³⁴ We should not take this to mean, however, that the younger Pico was a Platonist. If there is a certain sympathy for Plato in his writings, it is because he saw in Plato a compatibility to religion which he felt was absent in Aristotle. Still, there is much to which Pico objected in Plato. The bulk of Gianfrancesco’s critique of “pagan philosophy” was directed toward Aristotle merely because the Peripatetic philosophy was dominant in the West. If it had been, through historical accident, another of the non-Christian philosophies, his attack would have been directed primarily toward that philosophy.

After his general introductory remarks, Gianfrancesco launches into the tenfold attack on Aristotle. As we have said, many of his arguments are not so much philosophical reasons as the sort of criticisms we might expect from any of the contemporary humanists. But we shall see also, that at least some of his arguments contain serious philosophical criticisms of Aristotelian doctrine.

(3) *Humanist Criticisms of Aristotle*

These arguments occupy a central position in Book IV (chapters 4, 5, and 7), and many of them will be repeated later by other opponents of Aristotle. Some, however, were already commonplace by Pico’s time, being drawn from earlier writers, and a few seem to be original with him, or at least presented in a novel manner.

His first argument aims at cutting away any reliable basis for the authority of Aristotle by casting doubt on the very authenticity of the writings themselves. He contends that “it is doubtful whether we have an original work of Aristotle’s.” As he says:

I do not know any book possessed by Aristotle which was one among his own belongings. I do not speak sophistically or amphibolously, but of any book which might be derived from Aristotle’s own originals, written and edited by him. The variety in treating and arranging the Aristotelian books gives occasion for this doubt and uncertain feeling.³⁵

³⁴ “Sunt et ad hanc diem nonnulli qui aperire oculos incipiant et ad meliora pergendum arbitrentur; nec existiment Aristotelem tanti esse faciendum, quanti solebat.” *Ex. Van.*, IV, 2; p. 667. On Gianfrancesco’s tendency to Platonism see below pp. 72–73 and Schmitt, “Henry of Ghent, Duns Scotus, and Gianfrancesco Pico . . .”, p. 257. On his disagreement with Ficino and the Renaissance Platonists on magic and the interpretation of the *prisca theologia*, however, see D. P. Walker, *Spiritual and Demonic Magic from Ficino to Campanella* (London, 1958), pp. 146–47 and Frances A. Yates, *Giordano Bruno and the Hermetic Tradition* (Chicago, 1964), pp. 157–58.

³⁵ “Nec nunc Aristotelis librum ab Aristotele possessum et qui olim in eius bonis fuerit intelligo, nec sophistice loquor, nixus amphibologia, sed librum, qui ab exemplaribus Aristotelis propriis, ab eoque compositis editisve, deductus unquam fuerit. Dubitationi huic et

This seems to be a somewhat startling statement for a philosopher of the early sixteenth century to make, especially when we compare it to a remark of a modern student of the history of the Aristotelian text. Richard Shute says, "... we cannot assent with certainty that we have ever got throughout a treatise in the exact words of Aristotle..."³⁶

Pico cites an imposing array of evidence to cast doubt on the authenticity of the Aristotelian writings. Some authors, he begins, such as Diogenes Laertius, list many works of Aristotle which we do not have; whereas other works, which we do have, they fail to mention.³⁷ Further, certain writings are attributed to Aristotle which some later writers do not consider to be from his pen. Our author offers several explanations for such uncertainties: (1) there were many Aristotles,³⁸ (2) books were later falsely attributed to him,³⁹ (3) some of the Peripatetics have imitated the works of Aristotle so well that these have later become confused with the real works. Under this third conjecture, Pico is able to cite several examples. For instance, he says that the Preface to Themistius' *Physics*, as translated by Ermolao Barbaro, he has read word for word in the Greek edition of Simplicius (*at ego idem prooemium ad verbum legi in Graeco Simplicio*). Pico argues that either Simplicius secretly stole this from Themistius or he said the same thing word for word as Themistius, which is very unlikely.⁴⁰ Pico's argument is not

incertae sententiae dedit occasionem varietas Aristotelicos libros tractandi et in ordinem redigendi." *Ibid.*, IV, 4, p. 669. Pico apparently was one of the first scholars of the Renaissance to question the legitimacy of Aristotle's writings. The history of this criticism in the sixteenth century does not seem to have been studied in detail. For other examples see Ottaviano Ferrari, *De sermonibus exotericis* (Venice, 1575) and Francesco Patrizi, *Discussiones peripateticæ* (Basel, 1581).

³⁶ Richard Shute, *On the History of the Process by which the Aristotelian Writings Arrived at Their Present Form* (Oxford, 1888), p. 176. For more recent discussions of the question see Felix Grayeff, "The Problem of the Genesis of Aristotle's Text," *Phronesis*, I (1955-56), pp. 105-22 and Josef Zuercher, *Aristoteles' Werk und Geist* (Paderborn, 1952). Zuercher, who concludes, "Das Corpus Aristotelicum . . . , so wie es heute vorliegt, ist als Ganzes in dieser Form nicht von Aristoteles geschrieben, sondern von Theophrast (p. 17)," represents the extreme position on this still-debated matter.

³⁷ Diogenes Laertius names over 150 works of Aristotle, V, 22-27 (Loeb edition, pp. 464-75). Conspicuously absent from the list are such well known works as the *Metaphysics*, *Nicomachean Ethics*, *Politics*, and *De Anima*.

³⁸ Pico could have been led to this conjecture by Diogenes Laertius who mentions no fewer than eight Aristotles. *Ibid.*, V, 35 (Loeb edition, pp. 480-83).

³⁹ This conjecture is attributed to Ammonius(?).

⁴⁰ This story is related in *Ex. Van.*, IV, 4; p. 670. The problem arose because a number of the manuscripts of Themistius' paraphrase of the *Physics* contained Simplicius' preface. See the introduction by Henricus Schenkl to Themistius, *In Aristotelis physica paraphrasis*, CAG, V (Berlin, 1905), p. XIX. When Ermolao Barbaro translated Themistius (1480), he included the preface of Simplicius under the name of Themistius. See, for example, Themistius, *Libri paraphraseos* . . . (Venice, 1502), fol. 18r. Pico may have been one of the first to recognize the similarity. The editor of the edition Themistius, *Paraphrasis in Aristotelis posteriora* . . . (Venice, 1542) notes, however, "Non est Themistii prooemium hoc quamvis illi id Hermolaus ascripserit, sed Simplicii sicuti illi facile cognoscere qui callent literas graecas (p. 49)."

completely without point, for he is able to cite numerous similar examples from the Peripatetic School, and the bulk of such instances does carry some weight. He concludes that it is most difficult to distinguish the genuine Aristotelian texts from those written by his later followers:

It is difficult to distinguish by the style those books edited in the same century by learned men who delight in writing in the same way; and it is more difficult when the disciples take great care to emulate the writing style of their masters.⁴¹

Still greater confusion exists, he contends, from what happened during the reign of Ptolemy Philadelphus of Egypt (309-246). This ruler, who was much interested in Aristotelian philosophy, offered a reward to anyone who brought him a book of Aristotle for the famous Alexandria Library. This, according to Gianfrancesco, led to widespread misrepresentation and forgery, thus confusing matters still more.⁴² With this evidence in view, Gianfrancesco concludes that it is doubtful whether we have any works which are unquestionably from Aristotle's pen.

We are then confronted with the situation in which the genuine works (if, indeed, there are any) have been confused with the spurious ones. It is a state of affairs roughly similar to the situation when we look to our sense experience for reliable knowledge. In the same way as (according to the sceptic) some sense experience is perhaps reliable but other sense experience is unreliable, there are genuine writings of Aristotle and spurious ones. And again, the old sceptic bugaboo of the criterion rears its head to cast doubt on the whole of the Aristotelian *corpus*, much in the same way as it renders doubtful all our natural knowledge. Therefore, being faced with essentially the same problem in each of the two cases, Pico's conclusions are similar. He follows Sextus Empiricus and the other ancient sceptics in holding that there is no reliable criterion by which to separate valid sense knowledge from invalid and, consequently, all must be rejected as doubtful. Here a similar conclusion is drawn. Although some of the writings of Aristotle possibly survive, there are so many irregularities and inconsistencies within the *corpus* as to make us doubt the whole, part and parcel. In the

⁴¹ "Difficile enim ex phrasi discernere libros eodem editos seculo a viris doctis, qui eodem scribendi genere delectantur, difficilisque cum discipuli magistrorum in scribendo stylum aemulari et effingere magna cura contendunt." *Ex. Van.*, IV, 4; p. 671.

⁴² *Ibid.*, pp. 670-71. Most of the facts of Pico's account comes from Diogenes Laertius, Strabo (*Geography*, XIII, 1, 54), and Plutarch (*Sulla*, XXVI). For modern accounts see note 36. On the library at Alexandria see Edward A. Parsons, *The Alexandrian Library* (Amsterdam, 1957).

absence of a criterion by which we can separate the genuine from the spurious, we must conclude that the whole is irremediably in doubt.

We have here an interesting application of Pico's theoretical scepticism to a more practical matter. It might be observed, however, that his sceptical tendencies are not always quite so pronounced – even leaving aside the matter of religious belief. When it suits his purpose, he is content to be sceptical, but when it does not, he seems not to search so carefully for justification of his views. This can easily be documented by investigation of his position on certain other matters. For example, he does not raise the same questions about the reliability of the texts of other ancient writers, some of whose works have undergone the same dubious history as has the Aristotelian *corpus*. Nor does he question the numerous rather strange stories which he repeats rather uncritically from Sextus Empiricus, Diogenes Laertius, and other ancient authors. And, indeed, to these he adds a number of his own, often supposedly drawn from the experiences of the citizens of his own Mirandola. If these have a grain of truth, Mirandola, at the time of his rule, must have been a strange place indeed.⁴³

Aristotle's philosophy may have had a certain validity at some time in the past, while the master still lived and his true writings were still available, Pico continues. But, the intervening centuries have seen the ruin of these works by mutilation, by the destruction of bookworms, of damp and dew. In no case are the writings which have come down to us under the name of Aristotle to be relied on. When the later collectors and compilers of the Aristotelian works put together their editions, there was a great deal of variation both in the order of the works and the texts themselves. For example, the Arabic and Latin translations of the Eleventh and Twelfth Books of the *Metaphysics* do not agree. Moreover, there are certain textual variations within the work, which can be seen by simply comparing the different printed editions and manuscripts.⁴⁴ The same sort of criticism can be brought against a number of the other individual works attributed to Aristotle.

⁴³ See for example *Examen Vanitatis* II, 23 (p. 565) or for even a more extreme case see the story told in Gianfrancesco's *Strix* (Bologna, 1523), fols. E₂–F_r. The latter is repeated in summary form in *Ioannis Wierii de praestigiis daemonum* . . . (Basel, 1583), col. 359. On Pico's *Strix* and his relation to Wier see Charles B. Schmitt, "Who Read Gianfrancesco Pico della Mirandola,"? *Studies in the Renaissance*, XI (1964) pp. 105–32, at p. 116, esp. note 59 for a rather startling example given by Pico.

⁴⁴ His comments on the state of the *Metaphysics* are of some interest so we shall cite them *in extenso*. "Accedit quod et aliis in voluminibus par, si non maior quandoque dissonantia reperitur. Metaphysicorum libri quantum ad undecimum et duodecimum pertinet, in Arabicis et Latinis translationibus non conveniunt; et pars duodecimi, ubi Pythagoraeorum opinio, Homericorum carmine de unitate principatus explosa cernitur, apud Graecos et Latinos

Much of the confusion and the difference between the various versions of the writings can be ascribed to the Latin and Arabic translations, which make the text even more obscure and doubtful than it is in the Greek original. But, the translations can be corrected, whereas the originals cannot. As he concludes:

But even if we should grant freely and through no external compulsion that the Greek books of Aristotle are genuine and in them are preserved the true Aristotelian meaning and the actual ideas of Aristotle's mind, when we come to the Latin Aristotle, it is not Aristotle at all. I always except those books which Theodore Gaza has translated from the Greek. And if I am silent of the others, in that context which Averroes explained, in the translation from Arabic into Latin, as many errors as words are to be beheld. You can see how true an interpreter of Aristotle, Averroes, whom it has been customary until now for the unskilled to praise, can or should be considered; and also how much should be made of his testimony that has been placed in the preface of his exposition of natural philosophy. Not for 1500 years has an error of any importance been found in the Aristotelian writings, he claims. But he [Averroes], who through his ignorance of the Greek language did not read Aristotle's books, can give no judgment either of truth or falsehood; for he has used the Arabic translations, full of lies, on which he wrote his commentaries. And, if perchance he did read these books, he did not read the books of Aristotle, but those of Apellico Teius, of Tyrannico Grammaticus, and of those who afterward adopted the name of Peripatetics to themselves.⁴⁵

extat, apud Averrois codicem non invenitur. Et quoad pertinet ad Graecos quintus liber aliter sese habet in aliquibus antiquis ac in his qui sunt formis stanneis excusi Venetiis. Illud quoque sit indico quod in Marciana Florentina biblioteca, extat codex vetustus satis, in quo repetuntur quae in quinto dicta sunt, secus ac in aliis. Sed et Michael Ephesius in scholiis in primum de partibus Animalium librum citat modos necessitatis varios ex quarto Metaphysicorum, quos tamen constat esse apud plerosque in quinto, non quarto libro collocatos; et mirum hoc videri non debet iis qui Graecos Aristotelis codices ab Aldo Venetiis impressos legerint, ubi numerus librorum Metaphysicorum variatur omnis. Nam qui in Averrois translatione et aliis plerisque secundus est liber, ibi primus habetur; et qui tertius secundi loco repositus atque ita deinceps multa varietas cernitur." *Ex. Van.*, IV, 5; p. 673. On the history of the text of the *Metaphysics*, see Franz Pelster, "Die griechisch-latein Metaphysik-übersetzungen des Mittelalters," *Beiträge zur Geschichte der Philosophie des Mittelalters*, Supplementband II (1923), pp. 89-118, and also Joseph Owens, *The Doctrine of Being in the Aristotelian Metaphysics* (2nd. ed., Toronto, 1963), esp. pp. 69-106.

⁴⁵ "At qui, si gratis nulla prorsus extorquente ratione concedamus, Graecos Aristotelis libros legitimos fuisse et legitima in eis Aristotelea sensa propriosque animi conceptus asseruari; ad Latinum Aristotelem ubi venerimus, mirum quam ipse non erit Aristoteles. Libros eos semper excipio, quos Theodorus Gaza convertit e Graeco. Atque ut de reliquis taceam in eo contextu, quem exposuit Averrois de Arabico sermone in Latinum verso, tot pene errores, quot verba spectantur. Vide quam versus possit aut debeat Aristotelis interpres haberi, qui adeo ab imperitis celebrari solet Averrois; et quanti sit eius faciendum testimonium hoc ab eo positum in prooemio expositionis in naturalem philosophiam; non esse a mille et quingentis annis inventum cuiusquam momenti errorem in Aristotelicis literarum monumentis; cum nullum ipse ferre iudicium queat aut veritatis aut erroris, qui Aristotelis libros non legit ob ignorationem Graecae linguae, Arabica usus translatione plena mendacii, in qua et sua commenta refudit; et si forte legit, Aristotelis libros non legit, sed Apelliconis Teii et Tyrannionis Grammatici et illorum qui inde sibi Peripateticum postea nomen arrogavêre." *Ibid.*, IV, 5; p. 674.

(4) *Criticisms of Aristotle by his School*

After casting a veil of uncertainty over all the extant writings of Aristotle, Pico collects a number of specific instances where various later authors, who are characterized as Aristotle's followers, disagreed with their master. Gianfrancesco contends that "not only is Aristotle sometimes attacked and held to be uncertain by his followers, but also to be defective."⁴⁶ This argument will play an important role in Pico's critique. Gianfrancesco considers it to be significant to point out that what Aristotle said on any particular topic was not the last word on that subject, but could reasonably be disagreed with. This is evident from the way in which Pico approaches a number of problems throughout his critique. Besides his sceptical arguments against the Aristotelian epistemology, he considers it equally important to point out any uncertainty in the mind of Aristotle himself which might have led to a controversy among his followers. As it appears from reading the *Examen Vanitatis*, Pico's opponents – imagined or real – were a group who held the Aristotelian philosophy to be certain and complete. Thus, he felt it his job to signal the aspects of Aristotelian teaching which were not clear or were in error. One way in which he does this is to point to the various Aristotelian doctrines which were questioned by the Peripatetics themselves.

Included in Gianfrancesco's examples of followers and interpreters of Aristotle who differed somewhat on the master's meaning or even went so far as to disagree with him are Theophrastus, Andronicus of Rhodes, Themistius, Porphyry, Alexander of Aphrodisias, John Philoponus, Simplicius, Leo Magentinus,⁴⁷ Olympiodorus, and Peter of Abano. In considering this list, it should be noted that, while the names cited cannot all be considered Aristotelians, they are not opponents of Aristotle either, but men who have taken a serious interest in the Aristotelian writings. Only Theophrastus, Andronicus, Themistius, Alexander, and Peter could be properly called "Aristotelians." Still the others all wrote commentaries on one or more of Aristotle's works.⁴⁸ The

⁴⁶ "Nunc tantum ostendimus Aristotelem a sectatoribus quandoque vexatum et habitum incertum, atque etiam mancum." *Ibid.*, IV, 6; p. 675.

⁴⁷ This is a fourteenth century Byzantine writer, whose commentary on the *De Interpretatione* was printed in Venice in 1503. He has not been studied very carefully, but is given brief mention in Karl Krumbacher, *Geschichte der Byzantinischen Litteratur von Justinian bis zum Ende des Ostroemischen Reiches*, 2nd ed. (Munich, 1897), p. 431.

⁴⁸ Porphyry (233/4–305), the most important follower of Plotinus, is the author of the famous *Isagoge*, a work discussing the *Categories* of Aristotle which became one of the standard philosophical texts of the Early Middle Ages. John Philoponus, or Grammaticus (VI century), a prolific commentator on the Aristotelian writings, was one of the first Christians to

criticisms of the authors mentioned by Pico are not all large scale rejections of Aristotelian philosophy, but rather, for the most part, they are disagreements on somewhat minor details or an admission that some point of Aristotle's philosophy is not completely clear. Somewhat more far reaching is Gianfrancesco's argument that there are not only Platonists but also Peripatetics who hold that the study of "natural things" is not to be considered science, but merely opinion.⁴⁹ Unfortunately, he does not elaborate on this beyond mentioning several (commentators on Aristotle rather than "Aristotelians" in the strict sense) who say that Aristotle's teaching is not precise on one or another particular issue.

All things considered, this criticism is not carefully worked out and the examples cited are not entirely convincing. Pico tries to make a case for the position that there was a large scale disagreement among the Aristotelian commentators. This may be true up a point, but it must be kept in mind that they all found Aristotle's philosophy to be predominantly to their liking and of a positive intellectual value or they would never have commented on it in the first place. The divergence in opinion between the various members of the Aristotelian school is certainly great; but, on the other hand, there is not the widespread disagreement over basic tenets of the system which Pico tries to find there.

(5) *The Obscurity of Aristotle's Style*

Pico next considers the question of the ambiguities of Aristotle's writing style and its effects. The major part of this criticism is directed toward the basic obscurity of the Greek text of the works which have come down to us. Their literary merit is not considered to be of particular importance in this context, although Gianfrancesco Pico has shown some interest elsewhere in the question of literary style.⁵⁰ Our author

take a serious interest in Aristotle. Simplicius (VI century), a Neoplatonist in orientation, wrote commentaries on *De Caelo*, the *Physics*, *De Anima*, and *Categories*. Olympiodorus (VI century), another Neoplatonist, numbers among his works commentaries on the *Categories* and *Meteorology*. Leo Magentinus (XIV century), bishop of Mytilene, wrote commentaries on the *De interpretatione* and the *Prior Analytics*.

⁴⁹ "Possem innumeros citare vel Platonicos philosophos vel aliis philosophorum sectis addictos; at suspectos afferrem testes, qui affirmarent rerum naturalium cognitionem (in qua maxime laudatus Aristoteles) scientiam non esse, sed opinionem sive credulitatem seu mavis opinativam rationem, sicut et cogitationem esse, mathematicam notitiam rerum, solaque intellectilia quae ratione et intellectu concipiuntur scientiam parere, naturalia quae sensu et ratione coniecturam. Sed et Peripatetici non desunt qui etiam res naturales sub scientia non claudunt." *Ex. Van.*, IV, 6; p. 676. Simplicius, Olympiodorus, Leo Magentinus, and Peter of Abano are mentioned as disagreeing with Aristotle on this point.

⁵⁰ For example in the famous letters *On Imitation* which he wrote to Pietro Bembo.

begins by referring to the many ancient philosophers who have condemned Aristotle for his style. It is not the literary form to which they objected, he argues, citing Cicero and Justin Martyr who had high praise for Aristotle as a writer.⁵¹ Rather, they object to the lack of clarity of the Stagirite's writings. As Pico will say, Aristotle has purposefully written in an ambiguous style, for he himself was uncertain of the true solution to a number of problems which he treated. As evidence of this he refers to the frequent disputes which arose within the school after Aristotle's death concerning various points of interpretation.

It is sufficient here to mention the ambiguous text of Book III of the *De Anima* which deals with the famous question of the immortality of the soul. Aristotle's view on this question has been debated from the time of his earliest followers and commentators to the present day without a final resolution of "what Aristotle really thought." According to Pico, who mentions this and other examples, such disputes arise from a genuine ambiguity and obscurity in the style of Aristotle. This is attributable to several things. There was a real lack of care on Aristotle's part; Greek dialect words rather than pure Attic Greek ones are often used; and, Aristotle wrote in a condensed and concise way, which is not always free of ambiguity. Aristotle's works are not written in the enigmatic fashion of the Pythagoreans, Gianfrancesco admits, but rather have an external clarity and polish, which on closer investigation turns out to belie their true abstruse and recondite character.⁵² In a particularly incisive passage Pico cites the second-century Platonist Atticus⁵³ in support of his contention concerning the obscurity of the meaning of some of Aristotle's writings. Atticus compared Aristotle to a

⁵¹ Cicero praises the literary and rhetorical style of Aristotle several times in his writings. See for example *De Oratore* I, 11, 49. However, Cicero's knowledge of Aristotle was primarily through the more literary works, rather than through the numerous "esoteric" or "scientific" writings which passed into the tradition in the later centuries and which form the bulk of the *Corpus Aristotelicum* as we know it today. For a stylistic criticism similar to Pico's see Ludovicus Vives, *Opera* (Basel, 1555), I, pp. 336-38, the work *De causis corruptarum artium*.

⁵² "Et sane consensu omnium fere veterum philosophorum damnatus olim fuit Aristotelis scribendi modus; utpote qui ea quae ambigua minime viderentur, multis verbis pluribusque argumentationibus prosequeretur. Quae autem multa egerent cura ut tractarentur et in quibus esset inter doctos aliqua disceptatio, ea paucis absoluerit; atque in hoc genere quaestionum eleganti quidem, sed concisa nimium verborum serie usus esset, nec Attica solum, sed plusquam Laconica atque etiam plusquam Chilonica, ut Aristagorae Milesii verbo utar: Quid enim brevius. Sed neque aenigmatibus, more Pythagoraeorum uti voluit, descivisset enim ab instituto. At verbis vel ambiguis in sese tametsi prima facie viderentur expositissima, vel artificiose adeo compositis concinnatisque disserebat, ut primori fronte ipsoque in lectionis vestibulo pervia satis apparerent; ubi admitti volebas, excluderis recondito sensu et nimis quam abstruso, saepe quidem perplexo, semper nihilominus eleganti." *Ex. Van.*, IV, 7; pp. 676-77.

⁵³ See J. Baudry, *Atticos: Fragments* (Paris, 1931).

cuttlefish "whose nature it is, that when fishermen seek to capture it, the more it feels hands being laid upon itself, it dyes the water with that ink of the blackest kind, which it has in itself by nature, and soon eludes the eyes and hands of the fishermen."⁵⁴

In some of his works Aristotle spoke clearly enough and treated the subjects adequately, Pico continues. This is said to be true of *The History of Animals*, the *Politics*, and the *Economics*.⁵⁵ But, when Aristotle treated speculative philosophy, e.g. in the *Physics*, *Metaphysics*, and *De Anima*, "he cut short, suspended, and truncated his opinions" and did not always work out in detail what he promised to do.⁵⁶ He also tended to rely on the opinions of others, which were often later judged to be false.⁵⁷ Pico does not here suggest that Aristotle's works may be of two types written for different occasions, one type more clearly expressed than the other. He is content to argue that the works in which Aristotle was "observer" are clearer than those in which he was "theorizer." Again Pico betrays a strong anti-theoretical bias. In his own characteristic way, Gianfrancesco then expresses metaphorically the same argument regarding Aristotle's obscure style. This time, however, he adds a second comparison, that of the chameleon, which is drawn from Aristotle's own work, *On the Parts of Animals*:

From all of these things [which have already been mentioned] insofar as they pertain to his way of writing, it can be deduced that Aristotle's teaching is uncertain and obscure like the cuttlefish, speading forth its inky fluid, and even resembling the changing colors of the chameleon.⁵⁸

⁵⁴ "Atticus enim quod et supra [i.e. IV, 3] dicebamus philosophus, similem eum [i.e. Aristotelem] dicebat sepiae, cuius ea natura proditur, ut dum quaeritur a piscatoribus ut capiatur, iam iamque admoveri manus persentit, atramentum illud humoris nigerrimi, quod in sese habet congenitum spargens, inficit aquam ut ab oculis mox et a manibus piscatoribus elabatur." *Ex. Van.*, IV, 7; p. 677. The earlier reference to Atticus is on p. 668. The source of Atticus' statement is to be found in Eusebius' *Praeparatio Evangelica*, XV, 9, 13. Atticus' comparison seems to have caught the attention of a number of the humanists and philosophers of the Renaissance. It was already cited by Poliziano in his *Miscellanea* (in *Opera*, Lugduni, 1533; vol. II, p. 574) and in the sixteenth and succeeding centuries was repeated often by the opponents of Aristotle. I am indebted to Professor Alessandro Perosa for the reference to Atticus in Poliziano. See chapter VI, pp. 179-80 and Charles B. Schmitt, "Aristotle as a Cuttlefish: The Origin and Development of a Renaissance Image," *Studies in the Renaissance*, XII (1965), pp. 60-72.

⁵⁵ The *Economics* is now considered to be work of the Peripatetic School, rather than by Aristotle himself. See Aristotelis, *Quae feruntur Oeconomica*, ed. F. Susemihl (Leipzig, 1887), pp. V-XXX.

⁵⁶ This doubtlessly refers to Aristotle's often repeated promise to take up problems peripheral to a given discussion elsewhere in his works. Apparently this was not done in some cases.

⁵⁷ "Alienis etiam nititur opinionibus, quae postea falsae decursu temporum iudicatae sunt . . ." *Ex. Van.*, IV, 7; p. 677.

⁵⁸ "Quibus omnibus ex rebus quantum ad scribendi modum pertinet, Aristotelis doctrinam incertam esse colligi potest et sepiae spargentis atramentum more obscuram et etiam

It seems as though Pico tended toward a Platonic-Augustinian metaphysics, if we must try to characterize his attitude. This does not mean that he has gone over into the camp of the Platonists. On the whole, Gianfrancesco was not a particularly metaphysically oriented thinker; and, as we've said before, he has a strong anti-theoretical tendency. Rather than the positive elements of Platonism, what seemed to appeal to him, was what we might call the negative elements of the tradition. For, after all, besides engendering an elaborate system of metaphysics, the mystical, negative, enigmatic aspect of Platonism was never absent from the tradition. This side of Platonism, which could make Augustine look into himself rather than at the world for certitude, which could lead Nicolaus Cusanus to formulate his theory of "learned ignorance," or which could bring the members of the Academy (particularly the Middle Academy) to doubt the reliability of sense knowledge, was the aspect which fascinated and influenced Gianfrancesco. In accepting such a negative, critical attitude, Gianfrancesco did precisely what most Platonists had done – including such eminent ones as Plotinus and Ficino – and accepted almost at face value the Aristotelian natural philosophy, while rejecting the metaphysics and certain aspects of the methodology and logic. This is not to say that he did not criticize the Aristotelian physics, for he did, and severely. But, significantly, he did so almost wholly within the framework of the very physics he partially rejected. When he disagreed with Aristotle on a particular point of natural philosophy (as we will see more clearly when we discuss Book VI of the *Examen Vanitatis*) his counter-arguments almost always presuppose other Aristotelian principles. Consequently, a determined attempt is made to disassociate Aristotelian theory from observation regarding the interpretation of the natural world. Thus the *Physics*, which discusses the theoretical aspects of natural philosophy, is held to be questionable, while the *On Parts of Animals*, which is mainly the recording of observations, is considered to be of significant value. Of course, such a separation cannot be made completely, but the fact that an attempt is made reveals something important about Pico's attitude toward Aristotle. It shows above all a mistrust for generalizations based on physical phenomena, what we would call "scientific laws or theories." In adopting such a position, Pico shows himself to approach certain attitudes of the ancient sceptics. The sceptics, for all of their

chameleontis instar versicolore . . . " *Ibid.*, IV, 7; p. 678. Aristotle speaks of the chameleon in the *De partibus animalium* (IV, 11, 692a), but more extensively in the *De animalium historia* (II, 11). The cuttlefish is also mentioned in Book IV of the *De partibus animalium* (chap. 5, 678b) and in many other places, notably *De animalium historia* (IV, 1).

doubts, placed a high value on observations, although they had little confidence in theories. It was for good reason that Sextus was called "the Empiricist" as a member of the group of Alexandrian physicians who were called "the Empirics."⁵⁹

(6) *Criticisms of Aristotle by Other Schools*

Besides the disagreements which have occurred in Aristotle's own school of philosophy, numerous have been the criticisms that have come from the members of the other philosophical schools. It has not always been the case, Gianfrancesco argues, that Aristotle has enjoyed the vogue which he now has among philosophers. Rather, in the past there have always been many who have disagreed with him. His teachings have been disputed by the leaders of the other schools, which then abundantly flourished. Formerly there were many competing schools of philosophy, and the Aristotelians did not have the field to themselves as they have had recently. But, in general, the situation is not hopeless; and perhaps Pico's own attack will induce some to turn aside from Aristotle.

If you look at the number of his followers, [you will see that] now he holds very many, formerly fewer, and perhaps in the future fewer still, since many followers of Plato have risen up against him; and perhaps some will arise who agree with me and will say with me that neither in him, nor in other pagan philosophers is enduring and genuine truth to be found, as the majority – even of the learned – believe.⁶⁰

So Gianfrancesco sees his own epoch as the high point of Aristotelian influence in the West and calls out for others to come to his support in rejecting the Aristotelian doctrines. He looks to the past as a time of greater opposition and expresses the wish that in the future the same might again hold true.

In the ninth and tenth chapters of Book IV Pico attempts to summarize the feeling against Aristotle which the Christian theologians have expressed from the earliest times until the fifteenth century. Here again a rather impressive list of names is cited. Our author emphasizes the Christian theologians' rejection of certain Peripatetic teachings as being

⁵⁹ On this school see M. Wellmann, "Empirische Schule," in Pauly-Wissowa, *Real-Encyclopaedia*, ser. I, vol. V (1905), cols. 2516–24.

⁶⁰ "Si multitudinem consectaneorum spectes, nunc ipse pluribus abundat, olim paucioribus, et in futurum fortasse paucissimis, quando multi iam contra ipsum insurrexerunt Platonis asseclae; et forte alii extabunt qui mecum sentient et mecum dicent, nec in eo, nec in aliis gentium philosophis solidam synceramque veritatem quemadmodum vulgus etiam literatorum existimat reperiri." *Ibid.*, IV, 3; p. 668.

incompatible with their religion. Aristotelian doctrines such as those concerning Providence, the eternity of the world, and the soul, which were condemned at Paris, are discussed. Pico cites the Greek Fathers, Justin, the two Gregories, and Theodoretus, as well as Latin writers, including Augustine, Thomas, Henry of Ghent, and Duns Scotus. Also, many of the later Scholastics, who have shown some hostility to Aristotle (e.g. John Baconthorpe, Pierre d'Ailly, Jean Gerson, William of Ockham, and Nicholas of Lyra) are cited for their opinions. The examples which Pico gives are sometimes rather significant indicating basic disagreement with Aristotle by the theologians, but all too often they turn on a rather trivial point which does not have the importance that our author tries to give it. Essentially he attempts to point out every objection to Aristotle which he can find and to contrast this uncertainty with the infallibility of Sacred Scripture.⁶¹

As defenders of the view he rejects, he may have in mind the so-called "School of Padua," the founder of which, Pietro d'Abano, he had criticized severely in his earlier work *De Rerum Praenotione*.⁶² The secular, rather than religious, interests of these philosophers have been recognized by several later scholars. It is almost certain that secular interests would be held in low esteem by someone like Pico. At any rate, whether his remarks are directed against a particular group of individuals or not, Gianfrancesco interprets the turning away from Scripture and the increased reliance on the sense-based philosophy of Aristotle as a symptom of the increasing irreligion of his time.⁶³

Having reached the point where he has collected abundant evidence against the certainty of Aristotelian philosophy, Pico again reflects and asks the following questions of his readers. "Can we agree with a man erring in so many things? He has deceived us in some things, might he not also deceive us in others? Shall we not rather suspend judgment and consider as uncertain what remains?"⁶⁴ The key to this passage is the well-known sceptic formula of "suspending judgment." Aristotle has deceived us before, it is argued, and he is capable of deceiving us

⁶¹ This can be seen for example in the Epilogue of Book IV, p. 691.

⁶² Printed in the *Opera* (1601) pp. 248-466. On Pico's criticisms of Pietro d'Abano see Lynn Thorndike, *A History of Magic and Experimental Science* (New York, 1923-58) VI, 467 and Bruno Nardi, *Saggi sull'aristolismo padovano dal secolo XIV al XVI* (Florence, 1958), pp. 23-25.

⁶³ His whole attitude has a somewhat Savonarolian ring to it. He certainly was heavily influenced by the Ferrarese friar and while it would be incorrect to derive the whole inspiration for the *Examen Vanitatis* from his early contact with Savonarola, reflections of the influence are still there. See my forthcoming article cited in note 119, p. 26.

⁶⁴ "An homini plerisque erranti assentiemus? Ita ut quemadmodum nos fefellit in illis, fallere quoque possit in aliis? Annon magis suspendemus iudicium et incertum quod relinquitur habebimus?" *Ex. Van.*, IV, 11; p. 685.

further. The basis of certainty is absent from his writings, so we must suspend judgment regarding him, as we must do with all human philosophy. Only in Sacred Scripture is certainty to be found, Pico again repeats.

(7) *Criticism of Aristotle's Dependence on Sense Experience*

The major part of the criticism of Aristotle – and one of Gianfrancesco's more significant contributions to the development of philosophical thought in the sixteenth century – is his contention that Aristotelian philosophy is based on sense experience and is hence bound to be uncertain. The experience of the senses is fallible, Pico maintains, using the arguments developed by the ancient sceptics, because it is subject to a myriad of uncertain conditions. He draws the bulk of criticisms from the writings of Sextus Empiricus; but, as we shall see, he elaborates on these with some originality. The criticism that Aristotelian philosophy takes its starting point from the fallible basis of sense experience is treated in detail in the Book V of the *Examen Vanitatis*. We will treat it in detail when we discuss that book.

Before embarking upon an exhaustive critique of Aristotle from a sceptical point of view, Gianfrancesco neatly summarizes the arguments which will follow. In the opening words of chapter twelve of Book IV we find one of the clearest statements of his objections to Aristotelian philosophy:

Indeed since the teaching of Aristotle is based on sense, it is therefore easily proven to be uncertain; for sense is not only uncertain in many ways, but often deceptive; and, in many other ways than Aristotle realized, it can deceive and be deceived. By its very nature, sense is true unless it is variable. However, it is variable in different men and from one time to another in the same man and often many doubt their own sensations, which will become evident as this work proceeds. And from this no general rule for the truth of sense experience, which can always be applied both to man in general and to individual men (unless I am mistaken, indeed), is to be found . . .”⁶⁵

We should not make the mistake of believing that we have a sixteenth century Hume, but what Pico has said is rather startling. The

⁶⁵ “Verum enimvero cum Aristotelis doctrina fundetur in sensu, ideo facile convincetur incerta, quia non incertus modo plurimum sensus sed saepenumero fallax ac pluribus modis aliis quam putaverit Aristoteles et decipere potest et decipi. Est enim sensus suapte natura verus ni sit varius, varius autem in diversis hominibus est, et quandoque in eodem, et saepenumero de suis sensationibus ambigunt plurimi, ut opere procedente patefiet; unde nec generalis regula sensilis veritatis quae et universis et singulis hominibus et semper aptari queat (ni ego quidem fallor) invenietur.” *Ex. Van.*, IV, 12; p. 687.

strengths and weaknesses of his sceptical position will become evident as our analysis proceeds.

After stating his position, Gianfrancesco documents it with several texts from the writings of Aristotle. These are meant to demonstrate that the whole of Aristotelian philosophy is derived from sense experience. The two most important of these are from the *Posterior Analytics* and the *Physics*.⁶⁶ Since these two texts are central to Pico's argument and references to them will occur repeatedly throughout the remainder of our study, we will here attempt to analyze them in detail. They stand at the center of the Aristotelian methodology, and, as Pico rightly recognized, are pivotal to the whole of Peripatetic philosophy. On them depend to a large extent the criticisms of the Aristotelian methodology, which Pico analyzes with such great care.

The *Posterior Analytics*, the work in which Aristotle outlines his method of proof and "scientific demonstration," is particularly susceptible to the type of criticism that argues against the reliability of sense experience. Consequently, it is this book upon which Pico's criticism focuses. It serves as a starting point for his critique – the vulnerable spot into which a wedge can be inserted. From his critique of this work, Pico expands his criticism to encompass other parts of Aristotelian philosophy. We shall here briefly summarize Aristotle's position, before considering Pico's rejection of it.

It will be noticed that throughout Pico's critique of Aristotle he consistently overemphasizes the Stagirite's reliance on sense experience. Gianfrancesco has a decided tendency to make Aristotle much more of an empiricist than a critical reading of the texts will allow. The result is that Aristotle turns out to be much more Lockean than in fact he was. Whether this interpretation by Pico is due to the Aristotelianism that was being taught in Italy at his time is a question we will touch upon in the next chapter. More specifically, Pico consistently underestimates the role which νοῦς plays for Aristotle in the formation of the principles of scientific knowledge. It is true that for Aristotle all knowledge ultimately derives from sense experience, but sense experience in itself is *not sufficient* for knowledge. The mind has a certain activity, a certain

⁶⁶ "Est itaque apud Aristotelem ubique videre hoc sensus fundamentum magna cura iaci solere; atque ut ab Analyticis logicæ libris posterioribus fiat exordium, quibus omnis nititur Aristotelica doctrina, quibusque reliqua reddere certa magna cura molitur, sensum unicum esse totius aedificii fundamentum comperimus, totiusque demonstrationis initium. Eam enim demonstrationem ex propositionibus universalibus communit, propositiones universales ex singularibus per inductionem colligit, singularia sensu deprehendit. Porro Physicis quoque libris id præstituit principium, innatum esse nobis viam a notioribus nobis ad ea quæ naturæ sunt notiora, nobis autem nota, quæ sensibus haurimus." *Ibid.*, p. 687.

structure, which has a much more important role in knowledge than Pico seems willing to admit.

The *Posterior Analytics* deals with the origin, evolution, and validity of different types of knowledge and demonstration. A central concept of his work, and obviously a key one of the Aristotelian philosophy as a whole, is the notion of ἐπιστήμη or scientific knowledge, which is basic to all proof and demonstration, has a certainty equal to νοῦς or intuitive knowledge, and is second only to it in accuracy.⁶⁷ It is further held that it is possible to obtain scientific knowledge⁶⁸ and that it proceeds from demonstration.⁶⁹ Ἐπιστήμη itself cannot be derived directly from sense experience,⁷⁰ but must be obtained through demonstration which proceeds from the ἀρχαί or first principles.⁷¹ This leaves him in the position that he must determine from where the first principles come. After exhausting the other possibilities, Aristotle decides that the ultimate origin of these (i.e. the ἀρχαί) must be from a habit (ἔξις) innate in all animals, i.e. sense perception (αἰσθησις).⁷² There is also, however, another faculty involved in grasping the first principles. This is νοῦς, which is a part of the soul and which seems to be capable of immediately intuiting the first principles.⁷³

Aristotle is thus reduced to the position that the basis of scientific demonstration is rooted in sense perception. The faculty of νοῦς gives some aid, it is true, but without sense experience to "trigger" it we could never formulate a first principle. This is the position to which he

⁶⁷ *Post. An.* 100b 7-9.

⁶⁸ *Ibid.*, 72b24-25.

⁶⁹ *Ibid.*, 71b17-20.

⁷⁰ *Ibid.*, 87b28.

⁷¹ *Ibid.*, 71b20-24.

⁷² The reasoning of this passage is not straightforward and consequently cannot be outlined in a few words, but the argument is found in detail at *Post. An.* 99b15-100b4. The key passage that gives the conclusion is at 100a10-14. That is, the individual sense perceptions combine to form the abilities (ἔξις) to construct first principles (ἀρχαί). The military simile that Aristotle here uses is quite apt. When retreat is called in battle, the line reforms when one man takes a position and the others do likewise until it is completely reestablished. In the same way the ability to form first principles is established by a series of sense impressions. Thus, the 'individuals' of the unitary sense impressions unite, after many repetitions, to form a universal. And, as Aristotle continues, it is by the process of induction (ἐπαγωγὴ) that we come to know the first principles. Cf. 100b2-4. This process of induction whereby the universals are derived from particulars is also discussed at *Post. An.* I, 18 (81a38-b9). Here it is argued that if a person's sense perception is lost for some reason, induction and hence scientific knowledge is impossible. See also *Prior An.*, 46a17-22, where Aristotle tells why the principles must be learned by experience.

⁷³ *Post. An.* 100b5-17. There is a certain ambiguity which runs throughout Aristotle's treatment of this question. Can knowledge of the first principles be derivable from experience and dependent upon intuition at the same time? See the discussion of this in Eduard Zeller, *Aristotle and the Earlier Peripatetics*, trans. Costelloe and Muirhead (New York, 1962), I, pp. 194-212.

is led in his attempt to go beyond the Platonic notion of ἀνάμνησις and to escape the uncomfortable position expounded in the *Meno*. For Aristotle, the paradox of the *Meno*, that one can only either learn nothing or learn that of which he already has an unconscious knowledge, is unacceptable and an alternative must be found.⁷⁴ This compels him to search for the ἀρχαί upon which science is to be based. Ultimately he reaches the position described above, which focuses upon the role of sense knowledge in the formation of first principles.

The other key passage to which Gianfrancesco refers is the brief, but very important first chapter of the *Physics*.⁷⁵ Here Aristotle argues that the normal way in which we obtain knowledge is by proceeding from those entities which are clearest and most knowable to us to those which are clearest and most knowable in themselves. For, as he continues, these are usually not the same.⁷⁶ The process of acquiring knowledge is passing from the general to the particular.⁷⁷ And, as he continues the exposition, he explains that the whole is more knowable by sensation and the whole is a kind of general entity.⁷⁸ The meaning of this somewhat condensed explanation is made clearer by several specific examples. For instance, in the case of a young child, all men are called "father" and all women "mother" before he has learned to distinguish his own father and mother from all the other men and women whom he sees.⁷⁹ In this example the child has not yet learned to distinguish the particular (καθ' ἕκαστα, as Aristotle here uses the term) from the general (καθόλου). It is only by repeated sensations that he learns to distinguish the specificity of father from the generality of man.

It will be noticed that here again Aristotle is reduced to the position

⁷⁴ This was rejected at 71a29-30.

⁷⁵ This chapter consists of only about twenty lines in the Bekker Edition, but is one of the most important of the Aristotelian texts for determining his basic ideas on methodology.

⁷⁶ *Physics* 184a16-18.

⁷⁷ *Ibid.*, 184a23-24. Here it must be noted that Aristotle is not using the terms καθόλου and καθ' ἕκαστα in their technical philosophical senses of universal and particular. He is, rather, using them in a somewhat different sense to signify that our knowledge proceeds from the generality (καθόλου) of the multitude of sense experiences to the individual (καθ' ἕκαστα) concept which results from a certain number of them. If these words are taken in their usual philosophical senses, the whole chapter is rendered unintelligible. This is particularly true when is contrasted with other passages such as *Post. An.* 72a4-6 or *Post. An.* 81b6-7 where the words are clearly used in a logical context which requires that they be interpreted in their technical sense.

⁷⁸ *Physics* 184a24-25. This is almost in complete contradiction to the passage from the *Posterior Analytics* cited in the footnote above if καθόλου is taken in the same sense in both cases. It seems clear that the ὅλον is the whole realm open to sense experience and καθόλου the generality of this experience, rather than a general concept abstracted from particular experiences.

of beginning his methodology from the particulars of sense experience. For, although the clear distinction was made between things most knowable to us (τὰ γνωριμώτερα ἡμῖν) and those most knowable in themselves (τὰ γνωριμώτερα τῇ φύσει),⁸⁰ he says that under ordinary circumstances man proceeds from the former to the latter. Furthermore, the way in which the things are "most knowable to us" is through the channels of sense experience, as we saw above.⁸¹

In this way, Aristotle's general statements about how man receives knowledge are ultimately reducible to the oft-repeated maxim that "nihil est in intellectu, quod prius non fuerit in sensu." As Aristotle argues in the *Posterior Analytics*, "we learn either by induction or by demonstration."⁸² But the principles by which demonstration proceeds are attained by induction⁸³ and the materials of induction are sense experiences. As a result, Aristotle's entire system of knowledge is rooted in the perceptions of the senses.

Seeing this, we might raise the question, "Can the senses ever fail to render truth or are they infallible?" Aristotle, as Pico quickly points out,⁸⁴ admits that they can fail. But, what precisely is the way in which they fail? Aside from admitting that there are certain relatively minor imperfections in some of man's senses⁸⁵ and that too-intense sensations harm the sense organs themselves,⁸⁶ Aristotle seems content with accepting the infallibility of the senses, at least as far as individual perceptions are concerned. As he says in the *De Anima*, "For, perception of

⁷⁹ *Physics*. 184b12-14.

⁸⁰ *Ibid.*, 184a16-18.

⁸¹ See note 78 above. The general which is more knowable to us becomes known by sense (κατὰ τὴν αἰσθησιν). This also agrees with other passages in Aristotle, for example *De Anima* 432a2-10. Especially important is 432a7-8. The note to this passage in R. D. Hicks, *Aristotle De Anima* (Cambridge, 1907) p. 546 is also instructive on this point. The same is to be found in chapter 18 of Book I of the *Posterior Analytics* (81a38-b9).

⁸² 81a40-b1.

⁸³ *Post. An.* I, 18. This was also discussed above.

⁸⁴ "Ipse [i.e. Aristoteles] certe fatetur aliquibus modis falli sensum posse, idque trahi cum ex secundo libro de Anima potest, tum ex aliis operibus . . ." *Ex. Van.* IV, 12; p. 688. For examples taken from the Second Book of the *De Anima*, see the following discussion and notes. On the question of error according to Aristotle see Leo W. Keeler, *The Problem of Error from Plato to Kant* (Rome, 1934), pp. 22-40 and Irving Block, "Truth and Error in Aristotle's Theory of Sense Perception," *Philosophical Quarterly*, XI (1961), pp. 1-9. On the question of what Aristotle means by "perception" see Thomas J. Slakey, "Aristotle on Sense Perception," *Philosophical Review*, LXX (1961), pp. 470-84.

⁸⁵ For example, that man's sense of smell is defective (*de. An.* 421a9-13) or that some of man's senses are inferior to those of certain animals in which these are highly developed (*de An.* 421a20-22).

⁸⁶ For example at *De An.* 422a31-33.

the special objects of the senses is always true and is found in all animals.”⁸⁷

Error, on the other hand, can arise in several ways. One source is in the imagination,⁸⁸ the faculty mediating between sense and intellect. Although, sense cannot err regarding the whiteness of an object,⁸⁹ Aristotle contends, it can err regarding whether the whiteness is attributable to this or that object.⁹⁰ That is, one cannot be mistaken about undergoing a sense experience of perceiving white, but he can be mistaken on attributing whiteness to Peter or Paul. Finally, Aristotle states that sense is most likely to be deceived in the perception of the common attributes or accidental qualities which inhere in things and which are not the proper objects of the special senses.⁹¹ In other words, there might be perceptible qualities, which are accidental or common attributes⁹² in the same objects which are perceived as the correlative objects of the special senses. In such a case, it is only about the latter (i.e. the correlative objects of the special senses) that the senses cannot fail.⁹³

Aristotle's meaning here is best understood by referring to the end of the first chapter of Book III of the *De Anima*.⁹⁴ Here, he distinguishes between the proper objects of the senses (ἰδιώ) and the common ones (κοινά).⁹⁵ The proper objects of the various senses are things such as color for sight, sound for hearing, etc. As far as these are concerned there is little chance of error, as we said above. However, in the case of the common sensibles, such as motion, magnitude, or number, which we come to know through several of the senses,⁹⁶ error is possible,

⁸⁷ *Ibid.*, 427b11-13. The translation is taken from Hicks, *op. cit.*, p. 123. Similar opinions are stated elsewhere in the same work at 418a11-14 and 428a11-12.

⁸⁸ *De An.* 428a11-12, 16-18. Some attention was given in the treatise *De Imaginatione* to the question of error arising from the imagination. Cf. particularly chapter 7 (Caplan edition, pp. 42-48) and *passim*. See also our discussion in the next chapter.

⁸⁹ The sceptics, of course, would not even grant this to Aristotle. There are many passages in the works of Sextus Empiricus that could be cited on this point. The deception of visual perception is treated, for example, in the *Outlines of Pyrrhonism* I, 44-9 (Loeb Edition, pp. 27-31).

⁹⁰ *De An.* 428b19-22. Very similar is 418a14-16 and 425b3-4. On the general problem of error arising from sensation in Aristotle some interesting remarks are made in the section “L’αίσθησις erronea” in Paolo Coscenza, *L’inizio e lo sviluppo della conoscenza sensibile in Aristotele* (Napoli, 1958) pp. 89-95.

⁹¹ *De An.* 428b22-25.

⁹² κοινῶν . . . ἐπομένων has the meaning of “of those common things present in a secondary way,” hence accidents.

⁹³ As stated above in note 87.

⁹⁴ 425a14-b10.

⁹⁵ See also Zeller, *op. cit.*, II, p. 68.

⁹⁶ For the question of why there are several senses instead of one, see 425b5-9. Also valuable here is Hicks' observation “τὰ ἀκολουθοῦντα καὶ κοινά, ‘the accompaniments of the

particularly when the object being sensed is far from the organs sensing it.⁹⁷

In summary to this important, but condensed, analysis of the types of sense perception and their susceptibility to error, we might cite the opinion of R. D. Hicks:

The subsequent movement, generated by actual sensation, will differ in kind, according to the nature of the sensible object which has produced the original movement, that is, according as the percept is (1) a special sensible quality (ἰδιον); (2) a thing which happens to possess such quality (συμβηβηκός ὃ ὑπάρχει τὸ ἰδιον); or (3) one of the "common sensibles" (κοινόν) . . . The movement and consequently the mental image produced by (1) is true during the presence of the sensible object which produces it. In the images produced by (2) or (3) there may be falsehood or error especially if the object is perceived from a distance.⁹⁸

Although several details of Aristotle's theory of sense knowledge have been left unexplored here, we have outlined his general teaching on the subject. From what we have said it will be apparent that such a psychology is susceptible to the type of criticism that calls into question the very ability of the sense organs to perceive the "real." This is precisely the criticism that Gianfrancesco Pico della Mirandola uses against it, following the program of the ancient sceptics.

After citing the passages we have just analyzed in which Aristotle admits that certain types of error are possible, Gianfrancesco attacks several of the interpreters of the Aristotelian philosophy who hold that according to their master the senses cannot be deceived.⁹⁹ Error, however, can enter through the *sensus communis* and the *intellectus*, a matter given little attention by Aristotle, Gianfrancesco claims. These things have been treated elsewhere,¹⁰⁰ he continues, for he spoke of them when he spoke of the first of the sceptic "tropes," and there Pico's discussion of the matter was largely drawn from Sextus Empiricus.¹⁰¹ This trope deals with the fact that the differences in physical make-up of ani-

objects of the special senses which are common to all senses.' The 'common sensibles' are fitly called ἀκολουθοῦντα because the 'special sensibles' (colour, sounds, tangible qualities) are always accompanied by one or more of them. Thus everything perceptible has *number*, is either at *rest* or in *motion*, and things in space have magnitude (μέγεθος) and shape." *op. cit.*, p. 433.

⁹⁷ 428b29-30.

⁹⁸ *op. cit.*, p. 467.

⁹⁹ "... ut hinc longe fallantur qui sensum non decipi ex Aristotelis sententia censeant." *Ex. Van.*, IV, 12; p. 688.

¹⁰⁰ In the *Ex. Van.*, II, 22; pp. 560-64.

¹⁰¹ *Ibid.* Cf. Sextus Empiricus, *Outlines of Pyrrhonism*, I, 14 and 40-78 (Loeb Edition, pp. 10-11 and pp. 26-47).

mals make it impossible for the same objects to produce the same sense impressions in different animals. The point that Gianfrancesco is trying to make here is that Aristotle did not pay enough attention to such differences, which are so serious as to make one man different from another. Hence his whole system is susceptible to error, for it assumes men to possess equal faculties of sensation. Pico's argument is summed up as follows:

Certainly many truths can be known by sense, but that they can be known was not demonstrated beyond controversy by those Aristotelian reasons. In many ways sensible cognition is uncertain and many conditions must be present, lest the sense err in its judgment. When Aristotle and his followers, who have a wonderful faith in sense, noticed this, they indicated many exceptions about which we have already spoken.¹⁰²

Here Gianfrancesco does not go to the extreme position that nothing can be known whatever, nor does he quite adopt the Academic formula of "suspension of judgment," although at other places in his work he tends toward both. Rather, he is concerned with the lack of certitude that creeps into Aristotelian epistemology. Several important questions about the reliability of our knowledge are left unresolved by the Peripatetic philosophy; and, according to Pico, on these rests the whole edifice, and when they are seriously called into question the structure is likely to crumble. But, this will be discussed more fully in the next two books of the *Examen Vanitatis* and we will reserve fuller discussion of the matter until we analyze those books.

(8) Aristotle's Own Uncertainty

Pico devotes a rather brief chapter to showing that even though Aristotle did not realize that it was possible for certain types of error to come into his system (e.g. those arising from the variability of the senses), he did recognize that perfect truth is not possible in all matters. He points out that Aristotle and his early followers had more reservations about the certitude of his philosophy than do his modern followers. Essentially what Pico attempts to do is to list Aristotle's own doubts and reservations with regard to philosophy and, by doing so, hopes to show that the Aristotelian system is not as certain and as all-encompassing as some of the later Peripatetics consider it to be.

¹⁰² "Cognosci enim veritates multae per sensum queunt, sed ut cognosci possint rationes illae Aristoteleae extra controversiam non probaverunt. Incerta enim plurimum sensilis cognitio multasque adesse condiciones oportet, ne labatur sensus et in iudicando, quod et Aristoteles et sectatores qui sensui mirum in modum fidunt, cum animadvertissent, exceptiones attulerunt multas, de quibus iam verba fecimus." *Ex. Van.*, IV, 12; p. 689.

Let us give a sampling of a few of the passages which Pico calls to the reader's attention. There is, of course, the famous passage from the *Nicomachean Ethics* where Aristotle says that we cannot expect the same degree of certitude in all fields of study.¹⁰³ Then, there is the first chapter of Book II of the *Metaphysics* which raises further doubts. Here, Aristotle holds that part of truth is easy and part is difficult.¹⁰⁴ Later in the same chapter¹⁰⁵ occurs the famous "Platonic" passage where the relation of our intellect (τῆς ἡμετέρας ψυχῆς ὁ νοῦς) toward the things by nature most apparent¹⁰⁶ (τὰ τῇ φύσει φανερώτατα) is compared with the relation of the eyes of the bat toward the light of day. This comparison casts a certain amount of doubt on our own ability to reach the highest truths. Furthermore, Aristotle left some questions open to the reader by emphasizing that there are several possible answers to them. Examples such as his doubts concerning the number of spheres in the *Metaphysics*¹⁰⁷ and the nature of the generation of bees in the *On Generation of Animals*,¹⁰⁸ further show that Aristotle himself was not so dogmatic as some of his followers are inclined to be.

Pico then concludes Book IV as he concludes all of the books of the *Examen Vanitatis*. In the epilogue we find the moral of Pico's religious-oriented endeavor. The doubts which have been exposed in the preceding book should be a lesson to the readers that confidence cannot be placed in natural modes of knowledge. He exhorts them rather to rely less on the writings of the pagan philosophers and more on the solidity of the Scriptures of Christianity.

¹⁰³ *Nicomachean Ethics* I, 3, esp. 1094b12-13.

¹⁰⁴ *Metaphysics*, alpha, 1, 993a30-31. Modern criticism usually considers this book of the *Metaphysics* to be by an early follower of Aristotle rather than by Aristotle himself.

¹⁰⁵ 993b7-11.

¹⁰⁶ For the distinction in Aristotle between those things most knowable to us and those most knowable by nature see our discussion above, pp. 78-79 and the corresponding notes.

¹⁰⁷ XII, 8; 1074a6-14.

¹⁰⁸ III, 10; 759a8-61a11.

THE REJECTION OF ARISTOTELIAN "SCIENCE"

Quanto usui autem esse possit Sexti Empirici commentarius ad tuenda Christianae religionis dogmata adversus externos philosophos, pulchre docet Franciscus Picus Mirandulanus in eo libro quo Christianam tuetur philosophiam adversus dogmata externorum philosophorum.

Gentian Hervet, Preface to his translation of Sextus (1569).

(1) *Introduction*

It is in the Fifth Book of his treatise that Gianfrancesco Pico examines carefully the Aristotelian theory of "scientific demonstration." We have spoken of this briefly already.¹ It now remains for us to analyze his argument systematically. We might say at the outset that the loss of Pico's *Institutiones Logicae* to some extent impairs our present study. This work, which seems to have been one of Pico's more important philosophical writings, apparently was never printed and no manuscript of it is known to exist.² Almost certainly it treated many of the key problems which are also discussed in the *Examen Vanitatis*. However, the major lines of Pico's position are evident from the latter work; and, although some fine points of his logic may escape us, we can still learn much about his attitude regarding demonstrative science from a study of the *Examen Vanitatis*.

Pico's arguments against Aristotelian "science" form the basis of his entire critique and are perhaps his most original and significant contribution to the philosophy of the sixteenth century. His strengths and weakness as a philosopher, the sources which he favored and those with which he was in disagreement, his own originality and his precon-

¹ See particularly the discussion in the preceding chapter, pp. 75-82.

² This work is mentioned in the often reprinted letter from Gianfrancesco Pico to Lilio Gregorio Giraldi (*ed. cit.*, pp. 877-80) which lists the writings of the two Pico. It is one of the works most often cited by Gianfrancesco. See for example *Ex. Van.*, I, 13, p. 510; II, 32, p. 576; III, 10, p. 636; IV, proem., p. 658; V, 1, p. 694; V, 7, p. 724; V, 8, p. 728; V, 12, p. 749.

ceptions all become evident here. We will also see that certain of the issues raised in Book V and certain of the new applications of philosophical principles made by him clearly foreshadow similar developments in thinkers of the next century and a half. His originality is limited by his own very traditional attitudes. Nevertheless, certain novel aspects emerge.

Gianfrancesco begins his critique by telling us that he will not rely on commonplaces alone, nor simply on what other philosophers have said; but, he will also bring forth his own weapons to use against the Stagirate.³ He anticipates that his criticism of Aristotle's theory of demonstration will "render it uncertain in its foundation, as well as in its cause, means and end."⁴ Pico intends to show that "scientific demonstration" is untrustworthy, that the very foundation upon which it is based is deceitful, and that the results obtained therefrom are not worthy of our confidence. His "five ways" of disabling it may be summarized as follows: (1) The senses are susceptible to error in many more ways than were ever thought of by Aristotle. (2) Even if no errors are possible other than those admitted by Aristotle, these are enough to render uncertain our sense knowledge and the demonstration based on it. (3) According to Aristotle, demonstration proceeds from definitions which are more certain than demonstration itself; but it is not only difficult for man to know which of the two is more certain, but also to determine if a definition is actually certain in itself. (4) Even if a definition has certitude, this cannot be known by us according to Aristotle's teaching. Furthermore, what Aristotle says about these matters is not clear, but confused. (5) The method and end of demonstration can not be admitted since they are not possible unless universal affirmative propositions are admitted. It will be shown that these cannot be admitted.⁵

³ "Nec locis communibus et translatis utendum, nec principibus aliarum sectarum, qui Aristotelem confutavere omnino insistendum. Non Carneadis tormenta, non Ephecticorum philosophorum copiae, non Sexti Empirici machinae conficiant praelium. Non Galeni, non Avicennae particulares in illum excursions bellum indicant, sed ipsi nostro aere licet minus canoro bellum canamus, nostra promamus arma, licet acuminata minus. Demus quae etiam operam ut ipsemet Aristoteles se magna ex parte armet in semet, ac eius in illum familia validis arietet lacertis, deque ipsorum armamentario eliciantur instrumenta, quibus oppugnetur ad hanc agnoscendae veritatis expeditionem." *Ex. Van.*, V, 1; p. 693. For Pico's rejection of Aristotle see Ernst Cassirer, *Das Erkenntnisproblem in der Philosophie und Wissenschaft der neueren Zeit* (Berlin, 1922), I, pp. 145-49.

⁴ *Ibid.*, V, 1; p. 693.

⁵ *Ibid.*, V, 1; p. 694.

(2) *The First Way*

Pico often says that the senses are susceptible to error in many more ways than were ever considered by Aristotle. In fact, he tries to hammer this home to the reader time and again. In his polemic against Aristotle's method of demonstration, which occupies Book V of the *Examen Vanitatis*, Pico discusses the matter more fully and more penetratingly than elsewhere.

As we argued in the previous chapter, Pico interprets Aristotle's position as "nihil est in intellectu quod prius non fuerit in sensu." Gianfrancesco uses this well-worn formula several times in the *Examen Vanitatis*⁶ to identify the Aristotelian epistemological position. Although in such terms it perhaps makes Aristotle somewhat more empirical and less speculative than in fact he was, nevertheless, this is how the younger Pico tends to view his adversary's position. Pico cites as evidence for his interpretation the passage from the *De Anima*⁷ which states that, without sense, knowledge is impossible. Many prominent Peripatetics hold this to be the position of their master, Pico continues. He is able to cite – rightly or wrongly – Themistius, Simplicius, Philoponus, and Alexander in support of his position, not to mention that highly esteemed Latin student of Aristotle, St. Thomas Aquinas. But, to those who defend Aristotle in this, Pico has the following to say:

How do you defend all those things which rise from sense and from which Aristotle constructed his demonstrative art? How do you say an art is certain which uses uncertain principles? And is based on an uncertain foundation? You contend perhaps that sense is not *always* deceived. What then? For even if sometimes it is not deceived, nevertheless, at other times it is, either in pointing out or in judging or in both. And, therefore, it is uncertain. You say that error is corrected afterwards by other sense experiences or sensations, as most are accustomed to say. But I say that you are always uncertain, whether you are deceived in this or that sensation, for sense itself, as we have said, and as we will soon say more extensively, although it can be true, is nevertheless various, ambiguous, and doubtful; and it is often considered so by experience itself, when it performs its function.⁸

⁶ See for example I, 5, p. 492; V, 2, p. 695; V, 10, p. 735; V, 10, p. 737; V, 13, p. 759. Also see *De Elementis* 3, p. 118.

⁷ 432a7–8. Cf. *Post. An.* I, 18 (81a37–b10).

⁸ "... reliquias omnes quae a sensu oriuntur et de quibus proprie conficit artem Aristoteles, quo pacto defendes? Quomodo certam dices artem quae incertis principiis utatur? Incertis nitatur fundamentis? Contendes fortasse non semper decipi sensum, quid tum? Nam etsi quandoque non decipitur, tamen et quandoque etiam decipitur, sive in indicando sive in iudicando, sive in utroque. Ideoque incertus. Dices corrigi errorem aliis postea sensationibus sensationibusve, ut dici plerisque solet. Dicam ego te semper incertum, an in hac an in illa videlicet sententia fueris deceptus, nam sensus ipse ut diximus, ut mox etiam latius dicemus, in se ipso, quanquam verus esse potest, varius tamen et ambiguus dubiusque et est et habetur saepenumero ipsa experientia, cum suo officio defungitur." *Ex. Van.*, V, 2; p. 696.

Precisely to whom these remarks are addressed is not clear; but, from what is said here and elsewhere, it becomes apparent that it is the Aristotelians of the universities of Northern Italy to whom our author is speaking. This we will discuss later. Suffice it to say here that the second position ("that error is corrected afterwards by other sense experiences and sensations") to which Pico refers is one of the arguments used by Duns Scotus to refute Henry of Ghent's incipient scepticism.⁹

Let us look more closely at Pico's criticism of the Aristotelian position. First and foremost, the indication (*indicium*) and judgment (*iudicium*) of sense are uncertain and, therefore, so too is the art of demonstration, he contends. Our author devotes a good deal of attention to the analysis of these two parallel terms (*indicium* and *iudicium*). By the first, *indicium*, he understands "the taking in and reception of the sensible form by which the object itself is indicated to the higher faculty."¹⁰ On the other hand, he says that it is not clear precisely what Aristotle meant by *iudicium*, for Aristotle confused the functions of sense and intellect. Consequently there has been no end of confusion in the Peripatetic School. The basic difficulty occurs, according to Gianfrancesco, in a passage in the *De Anima* where judging (*τὸ κριτικόν*) is described as the function of both thought (*διάνοια*) and sensation (*αἰσθησις*).¹¹ Sense, therefore, has the double function of judging and indicating. As Pico puts it, "The sense indicates to the superior and higher faculty what it senses, what it takes in from without through those five entryways of the sensible species. This it judges by its own faculty and power."¹² Besides the passive function of merely receiving information from without, two other functions of sense can be distinguished: *indicium*, by which it transmits its information to the higher faculty of the intellect, and *iudicium*, by which it is able to judge or discriminate to a certain extent.

⁹ See Charles B. Schmitt, "Henry of Ghent, Duns Scotus, and Gianfrancesco Pico on Illumination," *Mediaeval Studies*, XXV (1963), pp. 231-58.

¹⁰ "Indicium appello haustum receptionemque sensilis formae qua res ipsa indicatur altiori potestati." *Ex. Van.*, V, 2; p. 695.

¹¹ τὸ τε κριτικόν, ὃ διάνοιας ἔργον ἐστὶ καὶ αἰσθησεως 432a16. Although Aristotle usually speaks of sense as being passive, in certain contexts a more active nature is attributed to it. For example, it is spoken of as judging (*κρίνειν*) several times in the *De Anima*. See 418a14, 422a21, and also *De motu an.* 700b19-21. In fact, this ability to judge might be considered the common element that connects the powers of sense and intellect. See *De Anima* 427a20-21. Also interesting is the opinion of Alexander of Aphrodisias cited by Hicks (*op. cit.*, p. 361) in his note to 418a14. According to this, the nature of the judgement seems to rest on the ability to distinguish the various range of qualities possible within the object sensed: that is, whether it is sweet, sour, or bitter, for example. Cf. *De Anima* 426b8-12.

¹² "Indicat enim sensus superiori altiorique vi quod sentit, quod forinsecus hausit per illa quinque seu canalicula sensilium specierum, idque ipsum etiam sua ipse vi et potestate diiudicat." *Ex. Van.*, V, 2; p. 695.

Up to this point Gianfrancesco seems to be following Aristotle's analysis. That sense has these two functions which are attributed to it by the Stagirite our author does not deny. As we have said elsewhere, Pico's general method is to attack Aristotle from within the system rather than from without. He does not attempt to overthrow the Aristotelian philosophy by offering an alternative one. Rather, he tries to show that certain imprecisions in the system, while seeming at first sight to be of relatively minor import, ultimately render the system doubtful. In the case under consideration, this means that by and large Aristotle's psychology is accepted; but, after its bare acceptance, a determined attempt is made to show that due to the fallibility of our senses, the reliability of the knowledge derived by means of such a psychology is extremely doubtful. That the *indicium* and *iudicium* give us some valid information, Gianfrancesco Pico does not seem to doubt, but they do not give us certitude sufficient to warrant our complete confidence.¹³ There are numerous reasons why we cannot give our unmitigated belief to the materials provided by the senses. Some he discusses in great detail, others are passed over with a bare mention. We shall take up each of these in turn.

Pico's first two arguments – (1) that Aristotle admitted the senses to be in some ways unreliable and (2) that many other philosophers, especially the sceptics, held the senses to be doubtful – we treat elsewhere and we shall not discuss them here.

The third argument states that "men often are in doubt about their own senses." That is, they often doubt whether they are actually seeing or hearing what they seem to be. Gianfrancesco does not expand on this criticism very fully, but it seems to be drawn partially from the sceptic critique of sense knowledge and partially from Pico's own experience. Aristotle's opinion is that the senses are never mistaken in their perceptions, but errors may enter concerning the "common sensibles."¹⁴ In other words, according to Aristotle, we cannot mistake the fact that we are actually sensing white or black, but only that the white

¹³ "Nam sensus quidem verum esse aliquando et indicium et iudicium non ambigo, nulloque homini, qua carneus est, omnino verius, tum, scilicet, cum non fallitur, cum non in ambiguo versatur, cum in sua duntaxat sententia persistit, nec ad aliorum sensa et iudicia refertur, quanquam fere semper adsunt conditiones ipsius sensorii varii quae res ipsas ob diversum temperamentum secus ac se habeat apud alios, saepe etiam aliter ac se habeat veritas, prae se ferunt; ob diversam etiam rei ipsius sensilis fluxamque naturam ea ipsa, quae obiciuntur sensorio, diversae sese habent temporis diversitate." *Ex. Van.*, V, 3; p. 704.

¹⁴ See *De Anima* 428b18–22. Also see our discussion of this in the previous chapter, p. 80. Cf. *De Anima* II, 6.

or black is attributed to this or that object. As we have said,¹⁵ the ancient sceptics would not even grant this to him and neither does Pico. Of course the point at issue here is one of the thorniest that we encounter in the matter of perception. If one, during a sickness – to use a favorite example of the sceptics and one often repeated by Gianfrancesco – considers something bitter to be sweet, what we can say? Is he actually having a “bitter” sensation and committing a mistake about his own experience? Or, on the other hand, is he actually having a “sweet” sensation brought about by the psychological and physiological changes wrought by his sickness? One notable thing about such a question, which can be answered in two completely opposite ways, is that the way in which a given thinker answers it often tells us something significant about his own philosophical position. A “naive realist” such as Aristotle tries to maintain that we are not mistaken about what we are actually sensing, but rather that mistakes enter for other reasons. The sceptic, Pico included, approaches the problem with more than a touch of doubt. Even of the most trustworthy sensations we cannot be completely sure, he holds; therefore, we do not have complete certainty even about our own psychological states. Pico has argued elsewhere¹⁶ against the same Aristotelian position, but, there too, he has treated the problem in summary fashion. These two passages are evidence enough to place our author in the extremely difficult position of doubting about his own psychological state. The difficulties of this position we need not go into here. Let it be sufficient to point out the problems that this raises when considered in connection with religious belief. It most certainly leads to conclusions which Gianfrancesco Pico would not be willing to defend. It is quite as easy to doubt that we are believing in the Christian Faith as to doubt that we are sensing a white image; but, the philosophical positions of the younger Pico do not always meet a high standard of consistency.

The fourth objection is one to which our author devotes somewhat more attention. According to it, even when men sense properly, just how they sense, how many senses they have, and what precisely these senses are, are issues which still remain in doubt. Pico contends that when Aristotle discussed these things in the *De Anima* he did not give

¹⁵ See our discussion in the previous chapter, note 89. The same question arises again in connection with Pico's disagreement with Duns Scotus on the reliability of sense knowledge. See Schmitt, “Henry of Ghent, Duns Scotus, and Gianfrancesco Pico on Illumination,” *Mediaeval Studies*, XXV (1963), pp. 244–55.

¹⁶ *Ex. Van.*, IV, 12; pp. 688–89. See our discussion of this in the previous chapter, pp. 79–82.

clear and definitive answers to them. Consequently, his interpreters have had constant disagreements about them. For example, Alexander and Themistius disagree with the *De Anima* and hold that there is but a single sense which takes various names from its different functions. Others say that there are only four senses instead of five. In general, there has been no agreement on the question. Furthermore, there is the problem of where the sensitive faculty resides: Aristotle placed it in the heart, Galen in the brain, and Averroes in both. This question has puzzled many philosophers and physicians.¹⁷ This is but the beginning. Our author points out numerous additional problems concerning the senses: does the sense know its own essence? is the sense active as well as passive? etc. According to Gianfrancesco, all of these things combine to demonstrate that we know very little about the senses and the process by which they operate. Such a state of affairs is not desirable, particularly if our whole edifice of knowledge is based upon the materials of sense.

But these arguments are of relatively little importance, it seems, when compared with Pico's fifth reason for mistrusting the senses. This is based on the physiological and physical variations which occur for different reasons and at different times both in the object being sensed and in the organ which does the sensing. This argument is derived principally from Sextus Empiricus with some added help being obtained from other sources, ancient and medieval. Major among these are the medical writings with which our author seems to have been reasonably well acquainted. He was close to several prominent physicians and medical theoreticians of his time including Niccolò Leonicensino, Giovanni Manardo, and Ludovico Carro.¹⁸ It was probably from these men that our author was introduced to the latest medical theories.

One of Gianfrancesco's favorite arguments against the reliability of sense knowledge is based on the variation of the humors in the body. The theory of the "four humors" is an old one, coming down to modern times from Hippocrates, but certainly not original even with him.¹⁹ It

¹⁷ Pico says very much the same thing in the *De Imaginatione*. See Caplan's edition, pp. 34-37, where the editor also gives references to the sources in Aristotle, Galen, and Averroes and adds several useful notes. Also cf. *Ex. Van.*, I, 14; p. 515. On the history of this question see Arthur Schneider, *Die Psychologie Alberts des Grossen, Beiträge zur Geschichte der Philosophie des Mittelalters*, IV, 5 (1903), pp. 173-84.

¹⁸ On Leonicensino and Manardo, see chapter I. Ludovico Carro is mentioned several times by Pico in the *Examen Vanitatis* (V, 4; p. 714, for example). For further information, see Giulio Bertoni, *La Biblioteca Estense e la cultura ferrarese ai tempi del duca Ercole I (1471-1505)* (Turin, 1903), pp. 97, 190-91. See also notes 19, 22, and 31 below.

was the dominant physiological scheme of ancient, medieval, and modern medicine until Harvey, and not even then was it completely abandoned. It was bound up with the Greek view of the world based on four qualities (hot, dry, cold, and moist) and four elements (air, earth, fire, and water). The medical analogy to these are the four humors which are organized in the following way:

Hot and moist – Blood	Cold and moist – Phlegm
Hot and dry – Yellow bile	Cold and dry – Black bile

Health is defined by the proper balance of the proportion of the humors and sickness by an imbalance. Various types of sickness are attributable to the preponderance of one or another of the four basic humors. Although the theory can thus be stated in a simple and brief manner, after it had been discussed and theorized on for many hundreds of years by Greeks, Romans, Arabs, Jews, and Christians it came to have many complicated and detailed ramifications. This is how matters stood when Gianfrancesco Pico began to elaborate on the theory in the course of his critique of Aristotelian epistemology.

As an imbalance of the proportion of the humors brings sickness, Pico argues, it also makes the sense organs receive their impressions in a peculiar and unreliable way. Furthermore, the proper balance of the humors, which keeps the sense organs in good working order, is rather delicate and may be easily disrupted. Moreover, the proportion of the humors varies from one individual to another.

However, the proportion itself [of the humors] can undergo variations in many ways. Because of aging, because of mere chance, and likewise at the same age because of diet, growth or withdrawal of some or of all of the humors, others may take their place. And, from this a different proportion results. Even if this proportion might remain the same, it is, nevertheless, different from that of another individual. So, consequently, one cannot reach any certain universal rule regarding sense perception, upon which demonstration might be based.²⁰

So the operation of a sense organ is determined by the proportion of the humors in the organ. If the balance is proper, the organ will func-

¹⁹ The earliest detailed discussion of the theory of humors and temperaments is in the work *De natura hominis* (ca. 420 B.C.), attributed to Hippocrates. A convenient edition is W. H. S. Jones (ed.), *Hippocrates* (London, 1923-31), IV, pp. 1-41. See also George Sarton, "Remarks on the Theory of Temperaments," *Isis*, XXXIV (1943), pp. 205-208. For a detailed study of *melancholia*, as one of the humors, and its influence see Klibansky, Saxl, and Panofsky, *Saturn and Melancholy* (Edinburgh, 1964).

²⁰ "Proportio autem ipsa multis variari modis potest, per aetatem, per casum, item eadem in aetate, nutritione, aetione, detractone, vel omnium, vel aliquorum, quorum videlicet in loco caeteri succedant humores, unde et varia quoque proportio dissuldet, quae etsi eadem esset, ab alio tamen individuo diversa fuerit, ut propterea certa ulla, et universalis regula sensilis, super qua fundetur demonstratio, trahi non queat." *Ex. Van.*, V, 2; p. 702.

tion as it should. If the balance is disrupted for some reason – which may easily happen – the organ will not function properly but will receive a deformed species of the object sensed.²¹ Pico gives several examples and, as is usual when he discusses such a problem, devotes greater attention to sight than to the other senses. If change and diversity affect the body as a whole, they affect the eye to a much greater degree, for, by Aristotle's own testimony the eye is not solid and unchangeable, but tenuous and mutable.²² Moreover, it consists in large part of an aqueous substance,²³ it being necessary that the humor of the eye is aqueous if sight is to be possible, as Aristotle argued in chapter 3 of the treatise *De Sensu*. Furthermore, the nature of the covering (*cutis*) of the eye and its location (*situs*)²⁴ are very important if it is to sense properly, our author contends. For the eye to render the sharp perception of which it is capable a delicate balance of conditions is necessary. The aqueous humor must be pure, the location of the eye must be concave and recessed (*reductum*) and not protruding (*prominulum*). But, because of the differing temperaments of different men, their eyes differ in color, in the aqueous humor which fills them, and in the quality of their covering. Furthermore, the locations of the eyes also vary from man to man (i.e. sunken, protruding, etc.). Because of these variables, the *indicium* (that is, the sensible species indicated to the higher faculties) and the *iudicium* (the judgment by the eye that an object is white or black) do not accurately refer to the original object which was sensed. Consequently, not only does the eye see differently because of age, but also because the organ itself is variable and does not present its *indicium* to the higher powers always in the same way, but variably.²⁵

²¹ The root of such an argument can be found in the *Outlines of Pyrrhonism*, but is not there spelled out in great detail. See I, 14, 51–52 (Loeb Ed., pp. 30–33) where it is argued that, for example, when we have a cold and phlegm is excessive, our sense impressions are different than they are under normal conditions. Sextus does not develop this argument in as much detail as Pico later does.

²² Pico cites several texts on this point, which state that the eye is affected by external objects, which of course is how the eye perceives. The one decisive argument is based on a text from the pseudo-Aristotelian *Problemata*, 887a24–27, which says that the eye is the most movable (εὐκίνητότατον) part of the body. See also the important discussion of eye diseases in Galen's *De symptomatum causis*, book I, chapter 2, in Claudii Galeni, *Opera omnia*, ed. C. G. Kuehn (Leipzig, 1821–33), VII, pp. 86–101.

²³ "Quod si corporis totius, certe et oculi ipsiusque pupillae, eoque magis quod non ita solida est natura atque compacta, sed tenui fluxilique; quando ex aquea plurimum substantia constat . . ." *Ex. Van.*, V, 2; p. 699.

²⁴ From the way the word *situs* is used in this context it seems to mean the way in which the eye is situated in the head. That is, whether it is sunken, protruding, etc.

²⁵ "Ad haec et pupillae purum humorem in percipiendis exquisitis colorum differentiis et oculorum situm, non prominulum, sed concavum et reductum, ad procul videndum asciscit.

Pico's attempt to prove the variability of visual perception is really based on physiology. Here again we have an example of his working within the framework of Aristotelianism to strike away at the underpinnings of the system. In his most detailed physiological and physical analysis of the eye and visual perception, Aristotle had emphasized the fact that it is necessary that a translucent (*διαφανές*) substance, water, be contained within the eye.²⁶ This is because light is necessary for sight and light must pass through a translucent medium in order to be visible. Aristotle also said that when the eye begins to lose the power of sight, because of age or injury, it is because the translucent character of the aqueous humor had been taken away.²⁷ With such a theory of vision before us, it is not difficult to see how Gianfrancesco Pico – nourished on Pyrrhonic scepticism and on the detailed physiological theory of the four humors – began to carry the analysis a step further. What would be the effect of the entry of one of the four humors into the eye? Would not this affect the vision in the same way as an imbalance of the humors in the entire body brings about a sickness of some sort? These two questions were answered by Pico in such a way as to bring him from the camp of Aristotle into the camp of his opponents.

Pico applies similar, but less detailed, critiques to the other senses. The current, predominantly Aristotelian, theory of the operations of the senses is adopted and then questions are raised concerning the ideal conditions upon which Aristotle's analysis is based. Aristotle's account of sense experience and of the operations of the sense organs is accepted, but grave doubts are cast upon his conclusions by the introduction of problematic conditions under which the senses do not function as they should if the optimum results are to be obtained.

Nowhere is Pico's argument more convincingly given than in his discussion of the effects of jaundice (*icterus*) upon sense perception. This argument was already used by Sextus Empiricus²⁸ and occurs several

Illa vero humoris et colorum varietas et cutis multiplex qualitas et diversus oculorum situs in diversis hominibus, a diversa humani corporis temperatione dimanant. Hac igitur sensus mutatione, hoc est, varietate sensilis potestatis atque sensorii, et de re sensili, cum indicium, tum iudicium permutatur. Id est, non solum quatenus sensus diverse atque aliter quam se habet res, de ea indicat, sed etiam quatenus sensus tali est natura, hoc est, mutabili et in sese frequentissime varia, atque ideo sese altiori potestati non uno semper modo, sed vario atque diverso, pro varia videlicet dispositione, proque ea etiam rem obiectam speciemque illius varie perspicit." Ex. Van., V, 2; p. 700.

²⁶ *De sensu* 438b6-8.

²⁷ *Ibid.*, 438b12-16.

²⁸ *Outlines of Pyrrhonism* I, 14, 44 (Loeb ed., pp. 28-29).

Humor theory, as a basis of difference, was used as late as La Mettrie: "Il est vrai que la Mélancolie, la Bile, le Phlegme, le Sang, &c. suivant la nature, l'abondance & la diverse

times in the *Examen Vanitatis*. For example, it is argued that, if one is afflicted with jaundice, honey does not taste sweet to him, but bitter.²⁹ Even more interesting for our present discussion is Pico's insistence that jaundice also affects the vision. It is well established – and known even in Pico's time – that the first visible symptom of a jaundiced condition is the appearance of a yellow color in the "white" of the eyes. Moreover, in extreme cases, patients complain of having yellow vision. Could there be anything that would fit better into Gianfrancesco's argument?

Since there is an imbalance of humors in the man sick of jaundice (as is evidenced by the yellow hue of the whole body) the sense organs will be affected, Pico argues. This will be especially true of the eye, which is more delicate and more easily disrupted than the other sense organs.³⁰ As our author said earlier in translating directly from Sextus Empiricus, "those who have jaundice consider the things which seem white to us to be surrounded by a pallor."³¹ Other variables which may affect our sense perception are also listed. These are generally fitted into Pico's conceptions of humoral physiology which we have already discussed. We might single out for brief mention the fact that Gianfrancesco, like most of his contemporaries, fell under the influence of the late medieval discussion of intension and remission of forms.³²

combinasion de ces humeurs, de chaque Homme font un Homme différent". *La Mettrie's L'Homme Machine: A Study in the Origins of an Idea*, ed. A. Vartanian (Princeton, 1960), p. 152.

²⁹ See for example *Ex. Van.*, II, 33; p. 585; IV, 12; p. 688.

³⁰ The line of argument here is involved and difficult to follow. We need not present it in detail, for it is not essential to our purpose to give a detailed analysis of the physiology of the sceptical position. The most detailed exposition of it is to be found in *Ex. Van.*, V, 3; pp. 702–703.

³¹ "... qui enim sunt icterici, pallore circumfusa putant, quae nobis alba videntur . . ." *Ex. Van.*, II, 22; p. 561. This, as is much of chapter 22 of Book II, is a direct translation from the *Outlines of Pyrrhonism*. Cf. I, 14, 44 (Loeb ed., pp. 28–29). In the same chapter other details are repeated from Sextus. For example: for similar reasons it can be supposed that those who have hemophthamia see red; if one gazes for an extended period at the sun he will see yellow; if the eyeball is deformed by pressing it out of shape, the visual image will also come to us in a deformed way. See the Galen text cited above in note 22, esp. p. 99, where Galen speaks of jaundice and hemophthalmia affecting the eye in terms very similar to those used by Pico. There are numerous passages in Galen from which Pico may have drawn some of his material. See also *De temperamentis* (ed. cit., I, pp. 509–694, esp. pp. 588–94) and *Quod animi mores corporis temperamenta sequantur* (ed. cit., IV, pp. 767–822). In his work, *De locis affectis*, Galen says, "And it is confessed by the most eminent physicians as well as philosophers that the humors as well as the temperament of the body completely alter the actions of the soul; by which it has been shown that the faculties of the soul follow the temperament of the body." *op. cit.*, VIII, p. 191. For an Aristotelian attempt to cope with this argument see below, pp. 162–68 and my paper cited in note 10, p. 163. I plan to study the physiological basis of Early Modern scepticism in greater detail in a subsequent study. Cf. *La Mettrie, ed. cit.*, p. 185.

³² For general discussion of this complicated, but important, aspect of medieval thought see Pierre Duhem, *Études sur Léonard de Vinci* (Paris, 1906–13), III, pp. 314–46; Anneliese Maier, *Zwei Grundprobleme der scholastischen Naturphilosophie*, 2nd ed., (Rome, 1951), pp. 1–109;

This aspect of natural philosophy, which was the subject of numerous treatises from the thirteenth to the sixteenth century, is basically an attempt to analyze qualities in terms of levels of intensity. In other words, it is a crude attempt to quantify qualities such as "hotness" or "whiteness," something which Aristotle had not done, having kept the categories of quantity and quality quite separate. For Pico, who is not interested in the theoretical aspects of the discussion, it is merely another way of talking about the variability of things. Although he never discusses this theory in detail, he uses it to emphasize the change in quality of light and its effect on visual perception;³³ or, to speak of the possibility of a changing proportion of the humors within the body or a particular part of it.³⁴

The physiological basis of Pico's scepticism had already been expressed in nearly the same terms in an earlier work *De Elementis*.³⁵ This work is concerned with a discussion of the primary qualities, elements, and humors. Particularly in Chapter V and VI he deals with the humors and temperaments, arguing that there is a very wide variation in men of the relative proportion of humors in their bodies; and, consequently, their temperaments will show the same variation. Although he does not draw out the same implications of the dubious nature of sense knowledge as he does in the *Examen Vanitatis*, he carefully and effectively sets the stage for it. The unity and uniqueness of man, which was so eloquently argued by Plato and Aristotle, and by the great medieval theologians, is here called into doubt:

For the differing proportion of the mixture [of humors] produces different temperaments. And, since these mixtures are not just four, but many more, there will be also many more than four temperaments of both human bodies and those of brute animals. Thus, the diverse ratio and proportion of the mixture has the function of a proper difference, which constitutes the species, for the proportions are taken instead of numbers. Consequently, a different kind of temperament will be produced whenever the proportion is different.³⁶

and E. J. Dijksterhuis, *The Mechanization of the World Picture*, trans. C. Dikshoorn (Oxford, 1961), pp. 186-88.

³³ See *Ex. Van.*, V, 3; p. 704.

³⁴ *Ibid.*, V, 2; pp. 701, 703; see also *De Elementis* 6; pp. 121-23.

³⁵ The work was probably composed during Pico's stay at Rome in 1512, the same period during which the famous letters on imitation were written. It is dated January 1, 1513 in the printed editions. This would perhaps put it in his "pre-sceptical" period, i.e. before he became acquainted with the writings of Sextus Empiricus. The first edition of the *De Elementis* of which I know is Basel, 1518. It is printed in the 1601 edition of the *Opera*, pp. 115-23.

³⁶ "Nam proportio diversa mixtionis diversas temperaturas parit; et cum hae mixtiones non quatuor duntaxat habeantur, sed multo plures multo etiam plures habebuntur temperatura humani aut etiam brutorum corporis. Ipsa etiam mixtionis diversa ratio diversae proportio vicem habet propriae et speciem afferentis differentiae (nam proportionum numerorum instar habentur) quare ubi diversa fuerit proportio, diversa prodibit species tempera-

What does such a statement mean? It means first of all that we are well on the road to a scepticism and nominalism that will become increasingly apparent in the next centuries. Man no longer has the fixed position in the hierarchy of beings which he had held with few exceptions throughout the Middle Ages. Rather, Pico emphasizes the differences between individual men and not the similarities. With such a view it becomes increasingly difficult to define man; and, as we shall see, it is a problem which offers difficulties to Pico himself. But besides, we are well on the way to an empirical view of man. It is not too distant from Pico's view to see man in the terms of Locke or Hume. To say that man's perceptions are controlled by the physiological constitution of the body is to say in addition that each man's experience is unique and puts us well on the road to subjectivism.

This is not to say that our author either adopted such positions or even thought of his analysis in these terms. It was manifestly unthinkable that he should do so. His whole world view, no matter how shaky or inconsistent, was held together by an omnipotent and omniscient God. But, when positions such as Pico's are adopted, it is not long before later thinkers begin to ask other questions; and, for example, when one does begin to doubt whether God can really bring into accord all of the disparate strands of the system, the Pandora's Box is opened and a whole series of new philosophical problems emerge and the synthesis must begin anew. On the other hand, the doubting of the old system, besides the confusion that it brings with it, is often accompanied by advances in other areas of endeavor, particularly the sciences in which doubt and empirical study constitute, if not the life blood, at least major constituents.

(3) *The Second Way*

If Gianfrancesco could give such an elaborate analysis of the failures of the senses in terms not considered by Aristotle, he also could build up a case for arguing that even the master did not have the confidence in sense knowledge which the theoretical underpinnings of his *scientia* require. Herein lies the *secunda via* by which Aristotle's demonstrative science is to be demolished. We must admit at the outset, however, that Pico's arguments here are by no means as cogent as those which we have just outlined. His procedure is to cull sections from Aristotle's

menti." *De Elem.* 6; p. 122. Pico also ties the diversity of literary style to diversity of temperament in his *De imitatione*. See *Le epistole 'De imitatione'*, ed. G. Santangelo (Florence), 1954), pp. 35-36. My attention was called to this passage by Donald R. Kelley, "Legal Humanism and the Sense of History", *Studies in the Renaissance* XIII (1966), pp. 184-99, at p. 191.

works in which some doubt concerning the reliability of sense knowledge is expressed, repeating some of the same arguments which we have encountered before.³⁷ New material is added, but this is generally of minor importance.

In the treatise *De Sensu*, Aristotle says that no sensible quality can be infinitely subdivided.³⁸ In the [pseudo-Aristotelian] treatise *On Colors*, however, it is stated that the variety of colors is infinite.³⁹ From these two conflicting statements our author concludes that our perception of colors is rendered doubtful. This argument is not really to the point and indicates merely a minor inconsistency in phraseology. A more serious argument is the charge that Aristotle held that error could enter through the imagination. Of this we have spoken briefly before, but since it does play a rather important role in Gianfrancesco's rejection of the Aristotelian epistemology we shall now give it more careful consideration. As our author puts the question in the *Examen Vanitatis*:

But this imagination or *phantasia*, more variable and more inconsistent than sense, where it has been deceived, will affect the intellect, whose judgment will waver and go astray. And this is not in disagreement with Aristotle, who decreed in his book *De Sensibus* that external objects could be understood only with the aid of sense. And in the second book of the *De Anima* he decreed that there is the following distinction between sense and intellect: that sense is always true concerning its proper objects, but it is possible that the understanding be false.⁴⁰

Several points in this passage require further comment. First of all, Pico's contention that according to Aristotle the imagination is less reliable than the senses seems to be correct. However, after his extended critique of sense knowledge, it is to be wondered if Aristotle or the Aristotelians would still consider imagination more variable than the account of sensation given by Gianfrancesco. Regardless of this, the failings of imagination are easily documented from Aristotle. In the *De Anima*,⁴¹ for example, at one point Aristotle goes so far as to say that imagination is mostly false (*αἱ πλείους ψευδεῖς*).

It is interesting to note the shift in emphasis that has taken place in

³⁷ See our discussion of this in the previous chapter pp. 80-82.

³⁸ 499a20f.

³⁹ 792a33.

⁴⁰ "Sed et ipsa imaginatio sive phantasia variantior sensu, ac desultoria magis, ubi decepta fuerit, imponet intellectui et ex ea vacillabit et aberrabit eius iudicium, ipso Aristotele non repugnante, cum in eo de Sensibus libro quicquam eorum quae sunt extra sanxerit non posse nisi ipso cum sensu intelligi. Qui et secundo de Anima libro decrevit hoc esse inter sensum intellectumque discriminis, quod ille priorum semper verus sit, contingat autem et falso intelligere." *Ex. Van.*, V, 5; p. 722.

⁴¹ 427b27-429a9, esp. 428a12.

Pico's thought since his early work, *De Imaginatione*. This work, which carries a dedicatory letter dated 1500, was written in what we have called his "presceptical" period. This is not to say that he does not show abundant doubts even in this early work, but apparently it was composed both before he had studied the works of Sextus Empiricus and before his determined effort to destroy the theoretical framework of Aristotelian philosophy. The *De Imaginatione* takes its point of departure from the *De Anima*, and it is both favorable to and in general accord with Aristotelian doctrine. We already see, however, the roots of the critique which will be developed more fully in the *Examen Vanitatis*. Whereas sense perception is singled out for criticism in terms of humoral physiology in the later work, in the *De Imaginatione* the failings of imagination – a point, which, after all, is more in accord with Aristotelian teaching – are discussed in essentially the same terms.⁴² We read, for example, in the earlier work:

I have said above that the variety of opinions, the faults of opinion, and all the defects of the rational soul, cannot come from reason itself and the intellect (be it understood, that they exist *qua* intellect and reason), but proceed from the defect of the imagination.⁴³

One notes, first of all, that the burden of error falls on the imagination, rather than on sense. It is said, however, that the variety of phantasms depends, among other things, on the objects perceived by sense.

Again, that varied and false phantasies arise in us from objects appearing from without and affecting us is fully evident from the fact that objects often change and variously affect the senses; for since imagination follows sense and is guided by it, necessarily when sense is varied, imagination is varied, and when sense fails, imagination fails.⁴⁴

Nothing whatever is said here of the possibility of the senses erring regarding their proper objects,⁴⁵ which is quite possible according to

⁴² This is discussed in chapter 8 of the work, "Unde imaginationum varietas." Caplan ed., pp. 48–57. The translations which I cite here will generally be taken from this edition.

⁴³ "Diximus ante opinionum varietatem eiusque culpas atque rationalis animae defectus omnis ab ipsa ratione et intellectu (qua scilicet intellectus et ratio est) provenire non posse, sed ab imaginationis vitio derivari." *De Imag.*, 8; pp. 50–51.

⁴⁴ "Ab rebus item extrinsecus occurrentibus quibus afficimur, varias oriri easdemque falsas imaginationes in nobis hinc liquido constat, quod objecta sensus identidem mutant varieque afficiunt. Cum enim imaginatio sequatur sensum ducaturque ab eo, consentaneum est ut et variato sensu varietur imaginatio, eoque labente, et ipsa labatur." *Ibid.*, 8, pp. 54–55.

⁴⁵ The basic Aristotelian position is stated thus: "Sensus autem propriorum sensilium, quamquam aut semper verus aut rarissime falsus, in iis tamen quae subjecta sunt ipsis sensilibus, hoc est, quibus accidunt ipsa sensibilia, fallitur saepenumero." *Ibid.*, 8, pp. 54–55. For Aristotle's arguments from the *De Anima* see our discussion in the previous chapter (pp. 79–81) and the corresponding notes. For a good statement of Pico's view on this see particularly note 65.

the destructive analysis presented in the *Examen Vanitatis*. Although Pico admits that error can enter through the senses, he allows it only in the mild form conceded by Aristotle; and the heady brew of Pyrrhonic scepticism, which will call all sense knowledge into question, lies still in the future.

Nevertheless, we already find the seeds of sceptical doubt in the *De Imaginatione*. Error is spoken of in a context that fits in rather well with Aristotelian opinion on the subject. Pico considers error to originate primarily in the imagination, and only to a relatively minor extent in the senses.

It is the testimony of philosophers and medical men that one's imagination is determined by the relative supply of blood, phlegm, red bile, or black bile. Thus, in correspondence with the diversity of humors, one's imagination is stimulated to diverse images; cheerful, dull, grim, sad. Influenced by these humors in the act of cognizing, the spiritual eye of the soul, the intellect, changes and is deceived, just as the bodily eye experiences illusions through tinted, parti-colored lenses . . . Although to the intellect truth itself is of one and its own nature, pure and unmixed, yet, on account of diverse and contrary phantasms, truth appears manifold, corrupted, and mixed. Moreover, those men are doubtless more fitted to perceive the verity of things, who, through bodily temperaments or through skill and practice, or by the special privilege of divine bounty, have obtained purer and simpler phantasms.⁴⁶

This passage, written some fifteen or twenty years before the *Examen Vanitatis*, is of great interest for the ways in which it is similar to, and those in which it is different from, the later work. It already shows a strong tendency to doubt the verity of knowledge attained by natural means. Here the major reason for doubt resides in the variability of temperament to which the human body is subject. Because of this, "the spiritual eye of the soul, the intellect, changes and is deceived"; and we see already the possibility for a variety of errors to enter the human intellect. Pico has accomplished this without straying too far either from the text or spirit of Aristotle.

Why is the major burden of error later heaped upon the senses rather than upon the imagination? This is not easy to answer. By the time of

⁴⁶ "Quem ad modum sanguine, pituita, bile rubra, aut atra abundat quispiam, sic et eius imaginatio philosophorum medicorumque testimonio huius modi naturam sectatur, ut pro eorum diversitate ad diversas imagines – hilares, torpidas, truculentas, maestas – exstimuletur, a quibus non secus intellectus, spiritualis animae oculus, in cognoscendo variat atque decipitur ac corporeus depictis variegatisque specillis hallucinatur . . . Ita et intellectui evenit quod, ei veritas ipsa quamquam suapte natura una est pura atque impermixta, ob diversa tamen contrariaque phantasmata multiplex, infecta, permixtaque praesentetur. Qui autem vel temperatura corporis, vel arte et exercitio, vel speciali divinae largitatis privilegio, puriora simplicioraque phantasmata adepti sunt, ii ad percipiendam rerum veritatem aptiores procul dubio sunt." *De Imag.*, 8; pp. 50–53.

the composition of the *Examen Vanitatis*, Pico had definitely moved out of the sphere of Aristotelianism into that of anti-Aristotelianism. The answer to the question perhaps lies in the fact that the origin of all of our natural knowledge – at least in Gianfrancesco's interpretation of Aristotle – is to be derived from sense experience. After seeing that Aristotle's epistemology rests on the slogan "Nihil est in intellectu . . .," it is a significantly more telling blow to show that all which we derive from sense experience is doubtful, than to show that the link between sense and intellect (i.e. imagination) is untrustworthy. When the source of the stream is polluted, there remains little hope of finding a healthy draught along the way.

There is, however, a further significant change that takes place in our author's position, one that perhaps marks the transition from mere doubt to scepticism. In the *De Imaginatione*, a chapter is devoted to "How the Disorder of the Imagination, and the Falsity Originating in the Temperament of the Body and the Objects of the Senses, Can Be Corrected and Cured."⁴⁷ In this chapter an attempt is made – still in terms of humoral physiology – to provide corrections for the maladies that cause a defective imagination. "The disorders which arise from the temperament of the body are to be cured by bodily things,"⁴⁸ our author says. Such a statement stands in bold contrast to the *Examen Vanitatis*. Practically nothing is said in the latter work about remedying the problems which confront us in our quest for natural knowledge.⁴⁹ Rather, after each book of the later work, there is an exhortation to turn aside from the quest for natural knowledge and to turn to the infallible knowledge of Scripture.

This, I think, marks a significant change in the younger Pico's intellectual orientation. If there is a single factor that marks the boundary between mere doubt and true scepticism, it is the fact that for the sceptic the situation cannot be remedied; for the doubter, remedy may be difficult, but is, nevertheless, possible. To turn to Scripture, as Pico recommends, is no real solution in the philosophical sense (though in a religious sense it may be), but merely an admission that such insurmountable problems are not, in the final analysis, of prime importance for the salvation of the soul. The contrast between the two stages of Pico's thought is clear. In the first stage the Aristotelian system, al-

⁴⁷ "Quo modo imaginationis morbus falsitasque de corporis temperatura deque objectis sensuum proveniens corrigi curarique possit." *Ibid.*, 9; pp. 56–57.

⁴⁸ "Qui de corporis temperatura manant morbi corporeis rebus curandi." *Ibid.*, 9; pp. 58–59.

⁴⁹ The attempt of the *De Imaginatione* is given bare mention, but nothing further is said of it. See *Ex. Van.*, IV, 12; p. 689.

though containing inconsistencies and flaws, is considered, nevertheless, to be a useful working hypothesis from which to take a point of departure. Although it does not give the same final answers as does Christianity, it still offers a useful approach to certain types of questions. In the second, or "sceptical," stage Pico judges the Aristotelian system to be unreliable to its very core. All knowledge gained through the principles of this system has a character that is irremediably doubtful. The only solution to this situation is to turn completely away from Aristotelian philosophy and to rely wholly upon the truths of the Christian Scriptures.

(4) *The Third Way*

A further serious charge, which Gianfrancesco brings against Aristotle, is that true and certain definitions cannot be found by the methods taught by Aristotle. If Pico's objection could be substantiated, this would be a serious flaw, for the entire Aristotelian discussion of scientific demonstration is based on the presupposition that the true definitions of things can be known. We cannot go into the many involved questions which surround the problem of definition in the Aristotelian writings, but we shall try to give a summary of the major points in so far as they are dealt with in Pico's critique.

After considering the possibility that demonstration and definition are the same thing, Aristotle concludes that they are in fact quite different. He holds this for several reasons, including the fact that demonstration proceeds from definitions and of definition there can be no demonstration.⁵⁰ Consequently, definitions are outside the realm of demonstration, but themselves are necessary for valid demonstration. But how do we reach a definition if it is accessible neither by demonstration nor induction,⁵¹ as is said later? First of all, "definition is of the essence and of the substance"⁵² and must be framed in terms of genus and difference.⁵³ Therefore, the definition of an object will consist in placing it in a genus and progressively differentiating it from other

⁵⁰ *Post. An.* 90b24-25. Also see 90b28-33. Note especially l. 30. The reasons for Aristotle's holding these positions are explained at 72b18-25 and 84a29-b2 and are ultimately based on the impossibility of demonstrating everything. As the opening sentence of the *Posterior Analytics* so aptly says, "All teaching and all intellectual knowledge arises from pre-existent knowledge" (71a1-2). Also see *De An.* 402b25-26.

⁵¹ Because induction merely shows *that* and not *why*. Cf. *Post. An.* 92a37-b2.

⁵² *Post. An.* 90b30-31.

⁵³ *Topics* 141b26-27. Cf. *Topics* 103b15. On definition in Aristotle see Zeller, *op. cit.*, I, pp. 265-73 and G. Vailati, "La teoria aristotelica della definizione", in his *Scritti* (Florence-Leipzig, 1911), pp. 485-96. On definition as it refers to the classification of animals see D. M. Balme, "Aristotle's Use of Differentiae in Zoology," *Aristote et les problèmes de méthode: Symposium Aristotelicum* (Louvain, 1961), pp. 195-212.

members of that same genus.⁵⁴ But such a method of definition depends also on three other rules in order to be adjudged properly executed.⁵⁵ These rules may be stated as follows: (1) the attributes selected upon which the differences are to be based must be of the object's essence (*ἐν τῷ τί ἐστίν*); (2) they must be arranged in order of priority; and (3) the selection must be complete. The process of definition should be carried out in such a way that "the genus ought to separate the subject from all other things and the differentia from something in the same genus."⁵⁶ Therefore, if we want to define man, according to the Aristotelian system, we will first place him in the genus of "animal"; we will then progressively differentiate him from other animals by following one or more lines of distinguishing characteristics. For example, we might begin by making the first difference "two-footed" and so on until we reach the *ultima differentia* wherein "man" has been distinguished from all other members of the genus "animal." The classical pictorial representation of this process is to be found in the so-called Tree of Porphyry. Needless to say, this process, which was exhaustively discussed by both Porphyry and Boethius, was one of the most debated philosophical questions of the Middle Ages. What does Gianfrancesco Pico have to say about the matter? Although he does not place as much emphasis on the faults he finds in the Aristotelian method of definition as on those he finds in basing scientific knowledge on the materials of sense, he does not lightly pass over the subject. For Aristotle, if true definition cannot be found, nothing can be truly demonstrated.⁵⁷ In Book V of the *Examen Vanitatis* Pico tries to prove that there is no way in which we can arrive at a true definition. The arguments of the sceptics, which our author recalls having used before, he will not use here. Rather, he will give his own reasons for disagreeing with Aristotle.⁵⁸

⁵⁴ This process is described in several places in Aristotle's writings. For example see *Metaph.* Z, 12 (1037b8-1038a35); *Post. An.* II, 13-14 (96a20-98a23); *Topics* VI-VII (139a24-155a39). The latter considers specific problems that are encountered in formulating a definition.

⁵⁵ *Post. An.* 97a23-b8.

⁵⁶ *Topics* 140a27-28. The translation is from the Loeb edition of this work, p. 569.

⁵⁷ "... nam si non est reperire veram definitionem, fieri nequitquam poterit, ut quicquam vere demonstretur, quomodo in posterioribus Analyticis demonstrandum Aristoteles docuit". *Ex. Van.*, V, 7; p. 723. For Aristotle's statement see our note 50 above.

⁵⁸ "Primo sumptum probemus, ostendendo nullam dari vere definiendi certam facultatem, non iam scepticis excursionibus usi adversus ipsam definitionem, quarum tertio huius operis libro mentionem fecimus, sed in Lyceo vel stantes vel passu nil concitato deambulantes. Dixi vere definiendi, quoniam et describendi et quoquo pacto non tamen vere et exacte definiendi, multos et ipse modos tradidi in secundo libro Logicarum Institutionum. Sane apud Aristotelem vere definiendi facultas minime tradita est, quanquam ipse multis locis definitionis meminit ..." *Ibid.*, V, 7; pp. 723-24. For Pico's discussion of the sceptic

Pico asks several penetrating questions with regard to the *ultimae differentiae*, which play so important a role in Aristotelian definition. Some feel that it is not humanly possible to arrive at a definition by the method set forth by Aristotle, our author argues. For example, St. Thomas in the *De Ente et Essentia* says that we cannot come to know the essential differences and the proper accidents of things.⁵⁹ In his *Commentary on the Metaphysics*, when discussing the Aristotelian process of definition, the same author says that it is sometimes necessary that the differences used in defining must be *per accidens*, if the essentials upon which they are based are unknown to us.⁶⁰ Thomas' argument is of course a valid one and points to one of the fundamental problems of the Aristotelian system as a whole. The question, "How do we know the substance of things, if our knowledge is gained primarily through their accidents?" Pico will consider later. Aristotle does not consider the question in contexts where he discusses definition, but rather gives the impression that the essence of things can be known and thereby their definition.⁶¹ That Aristotle also held that a large part of our knowledge of substances is gained through their accidents, is easily documentable from Aristotle's writings and will be discussed later.⁶²

We see again that in the final analysis the critique of the problems of knowing the *ultimae differentiae* hinges on the fact that these must be known through sense experience and this is subject to the many fallacies which we have already discussed. Another of the Aristotelian modes of knowledge has been found to rest on the support of the sense world and therefore, to Pico's mind, becomes doubtful with all of the rest.

notions on the subject of definition see *Ex. Van.*, III, 10; pp. 638-39. Cf. Sextus Empiricus, *Outlines of Pyrrhonism* II, 205-12; vol. I, pp. 284-89. The *Logicae Institutiones* is lost as we mentioned before.

⁵⁹ "In rebus enim sensibilibus etiam ipsae differentiae essentialis nobis ignotae sunt; unde significantur per differentias accidentales quae ex essentialibus oriuntur, sicut causa significatur per suum effectum, sicut bipes ponitur differentia hominis. Accidentia autem propria substantiarum immaterialium nobis ignota sunt; unde differentiae earum nec per se nec per accidentales nobis significari possunt." *De ente et essentia*, 6, in *Sancti Thomae Aquinatis . . . Opera Omnia* (Parma, 1865) XVI, p. 336a.

⁶⁰ "Sed tamen quandoque aliquis dividens differentias "faciet hoc" ut scilicet dividat per ea quae sunt secundum accidens, propter hoc quod non potest invenire proprias et per se differentias. Aliquando enim necessitas cogit, ut utamur, loco per se differentiarum, differentiis per accidens, in quantum sunt signa quaedam differentiarum essentialium nobis ignotarum." *Comm. in libros metaph.* VII, 112; *ed. cit.* XX, p. 495a. The *Metaphysics* text commented on is 1038a8-24. Pico's comments appear in *Ex. Van.*, V, 7; pp. 724-25.

⁶¹ Aristotle states clearly that neither genus nor *differentia* are accidental qualities. See *Topics* 144a22-27 and *Post. An.* 93a21-29. It is also quite apparent from the *Metaphysics* argument (VII, 12) that this is the case. It is worth noting that Averroes specifically rejects division *per accidens* in his commentary on the *Metaphysics* passage in question. See *Aristotelis Stagiritae Omnia quae extant Opera* (Averrois Cordubensis in ea opera omnes qui ad nos pervenere Commentarii) (Venice, 1573-75) vol. VIII, fol. 196.

⁶² See our discussion below, pp. 110-17.

On the other hand, there are some who argue that the *ultimae differentiae* can be known, Pico continues, but they never tell us precisely how one comes to know them. Or, furthermore, how do they know that what they call the last differences are actually the last? ⁶³ Do they claim to know these last differences by sense or by intellect? If they claim to know them by sense, they do not escape the criticisms of Pico's previous arguments. If by intellect, how does the intellect come to know the accidents of things? Consequently, there are difficulties in the Aristotelian scheme which cannot be overcome. Pico therefore concludes that a mode of definition which depends upon knowledge of the *ultimae differentiae* is no adequate definition at all.⁶⁴

Pico also raises the question of how we are to know that what we consider to be the last difference is actually the last. This point must be given careful consideration when we attempt to define by division. Our modern Linnean system of scientific nomenclature might be looked upon as an application of the Aristotelian method, although there are marked differences between the two. Within this system, now universally accepted by scientists, there has been by no means complete agreement on all items defined. In such a system there arise several problems which Pico does not consider. First, what is our criterion for division? It is not always easy to know along which lines to divide, especially if one takes a more or less nominalistic position that there is no essential nature which unites all members of the same genus. Secondly, how do we know that further division will not be discovered after we have found the "last difference?" This is a particularly difficult problem in certain branches of natural science, e.g. fresh water mollusca or tropical birds. These problems did not occur to Gianfrancesco it seems, although with his sceptical orientation it somehow seems

⁶³ "Nec me latet quibusdam placuisse fieri posse, ut cognoscantur, sed quatenam sint illae differentiae ultimae, neutiquam verbum factum est ab eis, quod sciam; solas etiam accidentium differentias ultimas cognosci quidam asseveraverunt, a quibus libenter peterem, quo pacto cognoverunt, quod ultimae videlicet sint differentiae, quas afferunt tanquam ultimas?" *Ex. Van. V, 7; p. 725.*

⁶⁴ "Nam si sensu id se dicant discriminis deprehendisse, tam erit incertum illas esse ultimas, quam incerta erit sensus ipsa sententia, quam supra docuimus incertam, ambiguum et nutabundam. Si vero intellectu dicant se potius id assequi de modo, quo intellectus accidentia cognoscit, primo quaeram et an sensu duce? ut tandem a coeno nequeant avellere plantam. Nec item me praeterit ultimas specierum ultimarum differentias ignotas dici a multis, non tamen nesciri eas, quae sunt generum specierumque subalternarum differentiae. At cur nam hoc? cum quas fatentur nesciri proximiores sunt sensui, quibus primas deferunt in cognoscendo parteis? Sed et eadem quoque eos circumstat difficultas, sensu ne videlicet, an intellectu eas ipsas deprehenderint? Si sensu, cum differentiae generum et specierum substantiae sint, quomodo, cum et ipsa quoque genera et species substantiae habeantur, sensus eas non agnoscat? quem tamen constat solis accidentibus immorari. Si intellectu? sensu fuit opus in primis, qui quam fallax est, tam erit et fallax indagatio et incerta deprehensio." *Ibid., V, 7; p. 725.*

strange that they didn't. The problem of the "criterion" is certainly an apparent one here; even Aristotle admits that it is difficult to determine the legitimate line of division to follow – i.e. the essential, as opposed to the accidental. It would seem that this should offer a perfect opportunity for Pico to use one of his favorite weapons, the problem of the criterion.

Pico raises other objections of varying degrees of importance. It is noted that Aristotle at one place maintains that definition consists merely in the *ultima differentia*⁶⁵ and elsewhere says that it is both genus and *ultima differentia*.⁶⁶ Moreover, Aristotle argues that the singular (i.e. the species) is more easily defined than is the universal (i.e. the genus),⁶⁷ whereas many of Aristotle's followers, particularly Themistius, hold the opposite.⁶⁸ Pico also defends Speusippus against Aristotle's criticism in the *Posterior Analytics*. The former apparently had argued that in order to define something, a knowledge of that thing's relation to everything else is necessary. Aristotle argued that such exhaustive knowledge is not necessary.⁶⁹ Pico, of course, goes to the defense of Speusippus, citing Nicholas of Cusa to the effect that "if precise knowledge is had of any one thing, it is necessary that it be had of everything."⁷⁰

The criticisms of Aristotle's theory of definition seem to be preliminary to Gianfrancesco's main argument. He tries to show by the most pragmatic of means – i.e. by pointing out the great disagreement that there has been in the history of philosophy concerning the definition of man – that clear and precise definition is impossible. Following one of his favorite forms of argument, he says:

It certainly seems to me, if the differences of things could be found by man, there should at least have been found long ago that one, by which man himself is properly constituted and by which he is separated from the other animals. That there has been a controversy about this from the earliest times, we shall soon show . . . Who is there who does not see that from this it follows that Aristotle's demonstrative art is uncertain, since he uses definition as a means? . . . And likewise he advises that definition must be attended to in each individual demonstration. Consequently, if the definition is not known, it is necessary that the demonstration be taken away.⁷¹

⁶⁵ *Metaph.* 1038a19.

⁶⁶ *Post. An.* 96b33–35.

⁶⁷ *Ibid.*, 97b28–29.

⁶⁸ *Paraphrasis in Post. An.* II, 13 (Teubner ed. I, p. 93, lines 29–30).

⁶⁹ *Post. An.* 97a6–22. See Harold Cherniss, *Aristotle's Criticism of Plato and the Academy* (Baltimore, 1944) I, pp. 59–64.

⁷⁰ "Cui quidem Speusippo, quanquam aliud agens Nicolaus Cusa, in tertio *Idiotae* libro, ubi agitur de mente, videtur aperte suffragari, cum scribit, quod si de una re precisa scientia habereur, omnium rerum scientia necessario haberetur." *Ex. Van.*, V, 7; p. 726. Cf. *Idiotae* III, 3 in Nicolai De Cusa, *Opera Omnia* (Lipsiae, 1932f.), vol. V, pp. 51–54.

⁷¹ "Mihi certe videtur, si inveniri possent ab homine rerum differentiae, debuisset utique

Here Pico attempts to show the widespread disagreement among the various philosophers and philosophic schools. This is the predominant method used in the first three books of the *Examen Vanitatis*, where Pico attempted to show the unreliability of non-Christian philosophy by demonstrating that the whole history of pagan philosophy has been marked by constant disagreement between the various schools. Again, our author argued in Book IV that Aristotelian philosophy is unreliable because of the constantly varying interpretation of the master's writings. Here he tries to do the same thing with regard to the definition of man. Actually such a procedure is but a subcategory of the argument from authority. It is an argument from lack of authority. It is a method that certainly has precedents in Sextus Empiricus and, to a lesser extent, in certain of Plato's or Cicero's philosophical dialogues, a technique that will appear on nearly every page of Montaigne and other sceptics after Pico. To argue that there is constant disagreement regarding a given subject and, consequently, that we can never know the truth about it, as Pico here does, is but another mark of scepticism – albeit, a rather naive type of scepticism. It is, after all, just another instance of arguing that something is uncertain because of conflicting evidences. There is little difference between saying that we cannot really know that honey is sweet because to some men with jaundice it tastes bitter and saying that we cannot know the definition of man because our most esteemed authorities do not agree on it. The second is merely a step further removed from the experiential world.

What use does Pico make of his argument in the case of the definition of man? First of all, Aristotle had held that man is the best known of the animals and that from our knowledge of man we can proceed to the study of the other animals.⁷² But, our author continues, Aristotle admits shortly afterwards that there is a good deal of uncertainty regarding the internal parts of man and often we must learn about these by comparing them to those of other animals similar to man.⁷³ Furthermore, St. Ambrose held that man must learn about himself by first learning about the other animals.⁷⁴ Moreover, when Aristotle spoke of

ea, quae sua est ipsius differentia, qua proprie homo constituitur, qua dispescitur a caeteris animalibus, iam diu esse inventa, super qua tamen a prima est antiquitate certatum, uti paulo post monstrabimus . . . Ex hac re quis est qui sequi non videat, artem demonstratricem Aristotelis incertam esse, quoniam definitione utitur ipse tamquam medio . . . Atque identidem monet observandum in omni particulari demonstratione. Quare ignorata definitione demonstrationem sublatam iri necesse est." *Ex Van.*, V, 7; p. 725.

⁷² *De Hist. An.* 491a19–23.

⁷³ *Ibid.*, 494b21–22.

⁷⁴ I have not been able to find a passage that spells this out in precisely the same terms indicated by Pico. Chapters 3 and 4 of Book VI of the *Exameron* (*CSEL*, XXXII, pp. 209–23)^s

the definition of man in the *Metaphysics*,⁷⁵ he used the example of distinguishing man by his characteristic of being two-footed. Would he have passed over a more proper distinction had he known one? Pico asks. Others say, however, that man is *animal rationale*. He will then infer that this is man. Someone a little more skilful will then deny this inference.⁷⁶ Thus Pico argues that there is no end to the quarrels which occur over the matter of precise definition. We can never "reach bottom," as it were. Additional refinements can always be found which will modify any given definition. All definitions are only provisional and not "essential" as Aristotle held.

Is there only one species of rational animal? "That there are many species of irrational animal no one denies; what is to prevent there being many species of rational ones as well?"⁷⁷ Porphyry has argued this, Gianfrancesco goes on to explain. In the *Isagoge*,⁷⁸ he distinguishes between animals which are rational and mortal (e.g. man) and those which are rational and immortal (e.g. God). Moreover, the same author argues in the *De Abstinencia* that the term "rational" should be attributed to all living things which are endowed with memory and sense.⁷⁹ Furthermore, there is the problem of the classification of the *demonēs*. Are these creatures, which are supposedly between God and man, to be considered rational animals? Although this concept (i.e. of the *demonēs*) pervades principally the Platonic-Pythagorean tradition and was discussed by essentially all of those who fell under its influence,⁸⁰ such notions have also been discussed by Aristotle and his followers, continues Gianfrancesco. In order to make his point that the notion of the *demonēs* pervades the whole of the philosophical tradition

give numerous examples from which man is bidden to pay attention to the actions of animals and learn thereby. It seems that this is what our author has in mind.

⁷⁵ 1037b8-1038a35.

⁷⁶ "Aristoteles in septimo Primae Philosophiae de hominis locutus definitione, bipedis exemplo est usus: putamus ne illam quae est vera et propria differentia, si non ignorasset, ab eo fuisse sub silentio praetermissam? At dicet quispiam, num tu es animal rationale? Quid tum ergo homo subinferet. Negabit consecutionem quispiam paulo peritior." *Ex. Van.*, V, 8; p. 727.

⁷⁷ "Cum multae sint species irrationalium animantium, quod nemo negat, multas etiam rationalium esse debere, quid prohibet?" *Ibid.*, V, 8; pp. 727-28.

⁷⁸ *Porphyrii Isagoge*, ed. Adolphus Busse in *CAG* (Berlin, 1887), vol. IV, pars I, p. 10, lines 10-12.

⁷⁹ In Book III, 1; *Porphyrii . . . Opuscula Selecta* ed. A. Nauck, (Leipzig, 1886), p. 187, lines 14-17. Here Porphyry attributes the view that all souls which partake in memory and sense are rational to the Pythagoreans. He himself endorses it also, however.

⁸⁰ This is true of a later Christian Platonist such as Ficino, who still devoted a good deal of attention to speculating about *demonēs*. See e.g. the commentary on the *Symposium* in Marsile Ficino, *Commentaire sur le Banquet de Platon*, ed. Raymond Marcel (Paris, 1956), esp. pp. 201-205 and D. P. Walker, *Spiritual and Demonic Magic from Ficino to Campanella* (London, 1958), pp. 42-53.

and offers a serious challenge to the definition of man as rational animal our author goes to rather ridiculous extremes. Since this is a prime example of the weakness of Gianfrancesco's method, we shall discuss it in some detail. Pico first argues that Aristotle held that there are such things as *demonēs*. This contention is based principally on a text in the *Metaphysics* which says that the term substance is predicated both of simple bodies and of composite bodies such as animals (ζῷα) and *demonēs* (δαίμονια).⁸¹ From this context and others it seems clear enough that Aristotle did not use the term *demonēs* in the way which Pico thought.⁸² Nevertheless, our author holds that it is Aristotle's considered opinion that there are *demonēs* and that they can be divided into parts.⁸³ Pico further argues that Aristotle several times spoke of God as being an animal.⁸⁴ With such evidence in view, Pico concludes:

Thus, if according to Aristotle the *demonēs* have parts, if he called God an animal and a species of animal, and if in the last book of the *Metaphysics*, "He [i.e. God] is the most divine of the things which appear to us," it follows that according to him these things [i.e. the *demonēs* and God] are rational animals. Therefore, doesn't it follow that Aristotle's opinion regarding the *demonēs* and gods doesn't differ from that of the Platonists, who said that the *demonēs* are corporeal and rational? Certainly in this matter there would have been no difficulty for my uncle Giovanni Pico to reconcile Plato and Aristotle.⁸⁵

Additional evidence is given to prove that St. Thomas also supported Gianfrancesco's view that Plato and Aristotle were basically in agreement regarding this.⁸⁶ From the bulk of the evidence cited, Pico

⁸¹ *Metaph.* 1017b10-13.

⁸² Ross argues that Aristotle here refers to the "heavenly bodies" when he uses the term δαίμονια and gives parallel texts to support this view. See W. D. Ross (ed.), *Aristotle's Metaphysics. A Revised Text with Introduction and Commentary* (Oxford, 1924) I, p. 310. It is evident that the word is used in an off-hand way and certainly not with the fixed terminological significance that it found in Plato and the Pythagoreans. This is also apparent from Bonitz' *Index Aristotelicus*.

⁸³ St. Thomas (*Comm. in libros Metaph.* V, lectio 10; *ed. cit.*, XX, p. 403a) is cited also as commenting on this text. Thomas, also seemed to recognize it as more Platonic than Aristotelian.

⁸⁴ For example *Metaph.* 1072b28-29, *De An.* 402b7. See Hicks' (*op. cit.*, p. 188) note on the latter.

⁸⁵ "Si daemones itaque, Aristotele auctore, partes habent, si Deum esse dixit animal et animalis speciem, si et in *Metaphysicorum* etiam postremo, ἔστι, δὲ τῶν φαινομένων θεϊότατον; est autem divinissimum eorum, quae apparent; sequitur eos esse secundum ipsum rationalia animalia. Num et hinc deducitur Aristotelis de daemonibus et diis opinionem non differre a Platonis? Qui et corporeos dixerunt et rationales. Hac in re certe nullus fuisset labor Ioanni Pico patruo meo in conciliando Platone et Aristotele." *Ex. Van.*, V, 8; p. 729. The quotation is from Aristotle's *Metaphysics*, 1074b16.

⁸⁶ In addition to the text cited above (note 82), Pico mentions *Sum. Theol.* I, I, q. 70, a.3 (*ed. cit.*, I, pp. 273-74) and *De Spirit. Creat.* a.1 (*ed. cit.* VIII, pp. 425-30). It should be noted that our author conveniently neglects to mention a most interesting and pertinent text in the

concludes that we cannot attribute to Aristotle the opinion, "animal rationale, ergo homo."⁸⁷

What has our author proven here? Or better, what has he attempted to prove? He has attempted to show that the commonly held definition of man as a rational animal is inadequate, for it does not sufficiently distinguish man from other beings which also have these characteristics of animality and rationality. Has he actually succeeded in doing this? It seems not. In his eager attempt to attribute to Aristotle a view that would tend to make the definition *animal rationale* inadequate to describe man, he has taken enormous liberties in interpreting the Aristotelian text. Aristotle does say what Pico attributes to him. On the other hand, there is a clear difference between the spirit and the letter of many an Aristotelian passage. This is a most important consideration that our author seldom allows to enter into his own reasoning. In fact, here it seems as though he has done little else than to seize upon certain texts where Aristotle was imprecise in his terminology and to try to make this Aristotle's considered opinion. The feebleness and even foolishness of such an approach is apparent and is but a single instance of the many in which Gianfrancesco Pico did not use sound judgment.

Other arguments of an equally trifling nature are offered. Contingent cases of various sorts are mentioned in further efforts to show that the rational animal definition is not specific enough to characterize man. For example, Pico points to the intelligence of different animals, a favorite argument of the sceptics.⁸⁸ Furthermore, philosophers like Anaxagoras, Porphyry, Plutarch, or Plato have indicated that all animals, and not only man, partake of reason to a greater or lesser degree.⁸⁹ In view of such conflicting evidence, we must reject the Greek definition of man as one receptive of intelligence and science (νοῦ καὶ ἐπιστήμης δεκτικόν), Pico says, following Sextus Empiricus.⁹⁰

work *De Substantiis Separatis*. Here Thomas devotes an entire chapter to the differences between the opinion of Plato and that of Aristotle on the matter. Particularly incisive for the present discussion is the following: "... quia Aristoteles non posuit aliquas animas medias inter caelorum animas et animas hominum, sicut posuit Plato: unde de daemonibus nullam invenitur nec ipse nec ejus sequaces fecisse mentionem." *ed. cit.*, XVI, p. 187a.

⁸⁷ "Quare videtur Aristoteles ipsam connexionem, animal rationale, ergo homo, per ea, quae dicta sunt, aperte reprobare." *Ex. Van.*, V, 8; p. 729.

⁸⁸ Many examples of this are to be found throughout the *Outlines of Pyrrhonism*, nor are they absent from many other ancient works such as Aristotle's naturalistic writings, Aelian, or Pliny. Pico's argument is often repeated by later sceptics, e.g. Montaigne in his *Apologie de Raimond Sebond* offers many examples of animal intelligence in his effort to minimize man's preeminent place in the universe. See note 127 below.

⁸⁹ Numerous examples of this sort are given in *Ex. Van.*, V, 8; pp. 731-32.

⁹⁰ *Ibid.*, V, 8; p. 733. This seems to be taken from *Outlines of Pyrrhonism* II, 26 (Loeb ed., pp. 168-69) which argues that some hold that "man is a rational mortal animal, receptive of

Gianfrancesco Pico has argued that there is uncertainty in the matter of definition; and, consequently, Aristotle's theory of demonstration, in which precise definition plays a central role, must be abandoned. Beyond the doubts concerning Aristotle's technique of definition, Pico tries to argue that we must remain uncertain about definition, for even such a key notion as "man" has by no means been given a definition that is both unambiguous and generally accepted by all philosophers. If the principles upon which demonstration is based are clearer and more certain than the demonstration derived from them, as Aristotle held, and if the definitions which make up these principles are themselves uncertain; then, our author can conclude that woefully little confidence can be placed in the demonstrations themselves.

(5) *The Fourth Way*

After his long harangue that precise definition is impossible, Gianfrancesco attempts to seal off any other avenue of escape by arguing that "even if we can reach a definition, it cannot be done by Aristotle's rules." He, therefore, tries to show that Aristotle's concept of definition (i.e. τοῦ τί ἐστὶ καὶ οὐσίας) is such that it can never be attained through the means allowed by Aristotelian philosophy. We have already seen that Pico has noted that there is a difficult problem involved in knowing the essence of things from sense experience alone. He now raises the question, "If definition lies in the essence of things, how are we to reach a knowledge of this essence from Aristotle's sense-based epistemology?" The problem is sharpened by the fact that Aristotle says in several places that we come to a knowledge of the essence of something through the accidental qualities of that thing. For example, in a passage from the *De Anima* cited by Pico it is put as follows: "For when we are able to give an account of all, or at any rate most of the attributes (τῶν συμβεβηκότων) as they are presented to us, then we shall be in a position to define most exactly the essential nature of the thing."⁹¹ Although this passage is not unambiguous,⁹² Pico accepts it more or less at face value and tries to make it fit in with what Aristotle says about definition elsewhere. Gianfrancesco's view is also colored by

intelligence and science." Such a definition is rejected by Sextus who says that "all animals are receptive of intelligence and science."

⁹¹ *De. An.* 402b22-25. The translation is taken from Hicks, *op. cit.*, p. 7. This difficulty of knowing the essences of things agrees with many other statements of Aristotle. For example, see the passages cited in the previous chapter, notes 103-108.

⁹² Some of the problems are discussed by Hicks, *op. cit.*, pp. 191-93 in his notes to 402b18-25.

the Thomistic teaching that we cannot know the essence of things in this life, but we can only approach them through their accidents.⁹³ Here, as elsewhere, he follows Thomas' interpretation of Aristotle, which strongly emphasizes this unknowability.

Although Pico adds a good deal of argument and counter-argument to his discussion of the problem, the key to his objection may be stated quite simply: (1) Aristotle's theory of demonstration is based on sound definitions. (2) Definitions are of the essences of things. (3) Aristotle further says that we come to know the essences through the accidental qualities inherent in the things. (4) But this is impossible for two reasons, (a) the knowledge gained through the senses is unreliable for the reasons previously given and (b) there is an infinite gulf between knowledge *per accidens* and knowledge of the essence, and we can never approach the latter through the former.

Just what Aristotle's position was on the matter is very difficult to assess. He certainly speaks of definition as though it were possible to attain and, indeed, it is necessary for "scientific demonstration." On the other hand, there is Aristotle's distinction between those things "most knowable to us" and those "most knowable by nature" and the *De Anima* passage cited above, which implies that accurate definitions are hard to come by. These seem to represent two conflicting viewpoints within the writings of Aristotle himself and do represent two strands within the tradition. The more "scientific" and "naturalistic" thinkers (e.g. Theophrastus, Averroes, and Zabarella) often tend toward the first view, while the more "theological" and "metaphysical" interpreters (e.g. the Neoplatonic commentators and Thomas Aquinas) tend toward the second view. There is certainly a good deal of latitude for both interpretations. In an overall view, it seems as though Aristotle wanted to hold that the knowledge of essences is possible, for otherwise there could be no "science." On the other hand, the difficulty of knowing such essences is recognized often and it seems that the recalcitrant and enigmatic character of the Platonic "ideas" was still in the back of Aristotle's mind whenever he mentioned the τὸ τί ἦν εἶναι.

As we might expect beforehand, Gianfrancesco Pico will tend toward the more Platonic view of reality. In doing so, he recognizes the problems raised by the other aspect of Aristotle's methodology. He

⁹³ In addition to our notes 59 and 60 above, see also Thomas' comments on the text in question in *Comm. in libros de Anima* I, 1 (ed. cit., III, p. 46). The key passage here says, "Sed quia principia essentialia rerum sunt nobis ignota, ideo oportet quod utamur differentiis accidentalibus in designatione essentialium . . . Et per eas, scilicet per differentias accidentales, devenimus in cognitionem essentialium."

finds it difficult to reconcile these two aspects of Aristotle, particularly since his own general view of the unintelligibility of the physical world found solace in the more theological interpreters of Aristotle such as St. Thomas. For Gianfrancesco, knowledge of accidental qualities is no knowledge at all, for between accident and substance lies an unbridgeable gap which no epistemology can traverse. Consequently, for him, the Aristotelian technique of approaching substance through accident, where the "most knowable *per se*" is approached by the "most knowable *quoad nos*" is untenable, for it merely tries to connect the sense world to the world of essences, a feat that cannot be done.

The problems raised for the younger Pico by this dichotomy are perhaps nowhere better to be seen than in a brief chapter which he devotes to a discussion of demonstration *quia* and demonstration *propter quid*.⁹⁴ Aristotle makes this distinction when he speaks of knowing (*ἐπίστασθαι*) a fact (*ᾧτι*) and knowing its reason (*διότι*).⁹⁵ The first type of knowledge does not play a central role in Aristotelian science and is little discussed by the master himself. When the Christian theologians became increasingly interested in Aristotle, the distinction became clearer and clearer, for in their view God is the prime example of a being whose existence can be demonstrated (*quia*, *ᾧτι*), but the reason for it (*propter quid*, *διότι*) cannot be given.⁹⁶ This distinction became extremely important in the later Middle Ages (often being called demonstration *a posteriori* and *a priori* by that time⁹⁷), becoming one of

⁹⁴ *Ex. Van.*, V, 11; pp. 743-46.

⁹⁵ *Post. An.* I, 13, 78a22f. Also II, 1 89b23-31.

⁹⁶ For example we read the following very clear statement in Thomas Aquinas: "... duplex est demonstratio. Una quae est per causam, et dicitur *propter quid*, et haec est per priora simpliciter; alia est per effectum, et dicitur demonstratio *quia*, et haec est per ea quae sunt priora quoad nos. Cum enim effectus aliquis nobis est manifestior quam sua causa, per effectum procedimus ad cognitionem causae. Es quolibet autem effectu potest demonstrari propriam causam ejus esse, si tamen ejus effectus sint magis noti quoad nos; quia cum effectus dependeat a causa, posito effectu, necesse est causam praexistere. Unde Deum esse secundum quod non est per se notum quoad nos, demonstrabile est per effectus nobis notos." *Sum. Theol.* I, I, q.2, a.2 (*ed. cit.*, I, p. 8b)

This is not to say that the distinction did not play an important role in the methodology of the "naturalistic" followers of Aristotle. Perhaps more than in the "theological" tradition it became significant through Galen, Averroes, and the Italian Aristotelians from the fourteenth to the seventeenth centuries. This aspect is traced in John Herman Randall, Jr., "The Development of the Scientific Method in the School of Padua," in his *The School of Padua and the Emergence of Modern Science* (Padua, 1961), pp. 13-68. Here I mean to emphasize the unknowable aspect that essences had for the theologians and the impact of this on Pico. Of the treatment of these concepts by the "scientific" tradition of Aristotelianism we will say more below.

⁹⁷ The distinction is perhaps nowhere so clearly drawn as in Albert of Saxony, who says, "Demonstratio quaedam est procedens ex causis ad effectum et vocatur demonstratio *a priori* et demonstratio propter quid et potissima; ... alia est demonstratio procedens ab effectibus ad causas et talis vocatur demonstratio *a posteriori* et demonstratio *quia* et demon-

the favorite topics of discussion among Aristotelians and non-Aristotelians alike.

As elsewhere, our author tends to read certain questions of later philosophy back into Aristotle. Although Aristotle did make the distinction between the two types of knowledge, it was not as clear-cut a separation as it later became. Pico, however, maintains the Scholastic separation of these two modes of knowledge and attempts to point the accusing finger at Aristotle for certain problems which arise when it is coupled with his own philosophy.

Pico has argued that Aristotle's rules for reaching the definition of something were inadequate because of the gulf between the world of sense and the world of essence; here he wants to do likewise. He maintains, for example, that if we proceed by the *a priori* method we will not be proceeding according to Aristotle's own rules. It must be remembered, our author argues, that things are most knowable to us through the senses (or at least so Aristotle holds) and this is the usual way in which we gain knowledge of them. But, if the process begins with knowledge of the effect and proceeds to knowledge of the cause, how do the senses reach the knowledge of the cause, which is of the essence?⁹⁸

The problem involved here is twofold according to Gianfrancesco. First, if we proceed by the *a priori* method (from cause to effect), how can we begin with the cause, which is of the essence and not of the accidentals, if the Aristotelian principle of "nihil est in intellectu . . ." is to be upheld? Secondly, if we proceed by the *a posteriori* method (from effect to cause) the problem is reversed. How can we ever come to know the essential nature of the cause from the contingent character of the effects? Again, these two are reducible to the same basic difficulty which we have noted before, the difficulty of relating sense knowledge to knowledge of the essence. Pico specifically rejects any type of "pragmatic" or "inductive" process whereby, little by little, we come to

stratio non potissima." As cited in Rudolf Eisler, *Woerterbuch der Philosophischen Begriffe*, 4th ed., (Berlin, 1927) I, p. 86.

⁹⁸ "Itaque a priori simpliciter et absolute cum procedit Aristoteles, quaeri ab eius nimis amatoribus posset, quomodo effectum deprehendit? Quo pacto ipsius effectum causae, quisquis ille fuerit effectus decernit? Nam si primo a causa procedit ad effectum ni suas deserat regulas, sensibiliter procedere illum omnino necesse est; neque enim principia illa intellectilia, nisi a sensu collegit, cognitis rebus singularibus, quoniam supra satis explicuimus. Si sensibiliter, quaero primum quo modo prius causam agnovit? Nam si intellectilis est causa, sensili opus fuit in primis, cum voluerit nos egere sensu, tamquam paedagogo. Quo pacto enim per intellectum causa priusquam effectus cognoscetur? Si nihil in intellectu esse voluit, quod prius non fuit in sensu, et ab effectu sensus cognitionem trahit. Si sensilis vero causa fuerit, nihilominus eam nisi coniectura non potuit apprehendere, intermediis videlicet accidentibus, cum sensus ipse ad rei essentiam non pervadat." *Ex. Van.*, V, II; p. 743.

know the one through the other. Such a method would simply be circular reasoning.

If you say that you have come to recognize the one through the other [i.e. cause through effect], and this in different ways and confusedly at first and then distinctly, you go around in a circle. For, if you say that he first uses sense and then, intellect, how will what he stated be true, that the demonstration *per causam* is more certain than demonstration *per effectum*, since to prove this he uses no other foundation than of sense? But surely you will say that sense is the prior way, intellect the surer and more proper. But you cannot deny that it is credited to sense. Therefore, all certitude will depend on sense, which perceives the effect through which the cause is known.⁹⁹

To the problem of connecting sense with intellect there are two possible solutions. The first would be to reach intellectual knowledge through a purely inductive and abstractive procedure. This, more or less, was Aristotle's view. The second way would be to derive intellectual knowledge *ab alto*, by way of illumination as the Augustinians held or by way of an *ἀνάμνησις*, as in Plato. That Pico rejects outright the first method is apparent from what has already been said and will become more apparent when we discuss in greater detail his views on induction. That he has some sympathy with the second approach is shown by his defense of Henry of Ghent's theory of illumination. It must be noted, however, that his sympathy for Henry goes only so far as to allow illumination in matters of faith and religion; as far as rational knowledge of the physical world is concerned, our author remains in the sceptical predicament.¹⁰⁰

Let us now consider the question "Against whom is Pico's argument directed?" To determine this precisely would be very difficult, for he does not usually mention the names of living authors, particularly when he is in disagreement with them. It seems, however, that we can pinpoint quite accurately the group of thinkers against whom his remarks here are directed. It must certainly be that group of northern Italian Aristotelians who imprecisely go under the name of the "School of Padua." For our purposes here we will take Agostino Nifo's *Commen-*

⁹⁹ "Si alterum altero dicas agnovisse, idque diverse, confuse primum, mox et distincte, circulo revolveris. Nam si sensu primum mox intellectu dicas illum fuisse usum, quo pacto illud verum fuerit, quod ab eo prolutum est, quod certior est, quae per causam quam quae per effectum ducitur demonstratio, cum ad id monstrandum alio non nitatur fundamento quam sensu? Dices sensus quidem viam priorem esse, intellectus vero certior et digniorem. At negare non potes quin sensui feratur accepta omnis, igitur certitudo pendebit a sensu qui effectum percipit ex quo causa cognoscitur." *Ibid.*, V, 11; p. 743.

¹⁰⁰ This is discussed in detail in Charles B. Schmitt, "Henry of Ghent, Duns Scotus, and Gianfrancesco Pico on Illumination", *Mediaeval Studies*; XXV (1963), pp. 231-58.

tary on Aristotle's *Physics* as a representative work of the Aristotelians during the early years of the sixteenth century.¹⁰¹ The orientation of Gianfrancesco's remarks becomes apparent when he speaks of two counter objections that might be raised against his critique. First, it might be said that his arguments are valid only for those things which are known by us in one way and by nature in another, since there are some things which are simultaneously known both by us and by nature. In these things we do not proceed from cause to effect or from effect to cause, but the one is known when we know the other.¹⁰²

The question whether the same thing can be equally known by us and by nature is taken up in Nifo's *Commentary*. After discussing several different points of view on the problem, he concludes that the same thing can be equally known by us and by nature. This is primarily true in mathematics, for in that field there is no contradiction involved in saying that the same thing is known at the same time both by us and by nature.¹⁰³ In making such a statement, Nifo has to distinguish between mathematical objects and physical objects. Such a distinction Pico will not agree to, suddenly at this point abandoning the Platonic urge and becoming more Aristotelian than Aristotle, so to speak. Aristotle sharply distinguished between the *notiora nobis* and the *notiora naturae*, Pico insists, citing the opening chapter of the *Physics*. Nor does the distinction fail to hold in the realm of mathematics, he continues. Geometrical or arithmetical concepts (e.g. circle or number) can be known

¹⁰¹ This work, compiled in 1506, treats in abundant detail the important first chapter of the *Physics*. We use the following edition: *Augustini Niphi . . . Super octo Aristotelis Stagiritae Libros de Physico Auditu . . .* (Venice, 1559). Although our choice here is somewhat arbitrary, Nifo's commentary gives a "typical" Aristotelian view and also the range of the questions being debated in the early years of the sixteenth century. For example, Nifo specifically rejects Pico's charge that the use of the "double procedure" is circular reasoning (see note 99). See Niphus, *ed. cit.*, lib. i, text 4, pp. 12a-b. For other examples see Randall, *op. cit.* Nifo's significance as more than a "timeserver" is clearly brought out by Edward P. Mahoney, "The Early Psychology of Agostino Nifo" (Ph. D. Dissertation, Columbia University, 1966), 2 vols. The loss of Pico's *Logic* is felt here, since his discussion of these important problems is very sketchy in the *Examen Vanitatis*.

¹⁰² "... Primum quod non de omnibus demonstrationibus quia et propter quid nostra in Aristotelem argumenta probent, quod probare tentavimus, sed de iis tantummodo quae aliter nobis aliter naturae sunt nota. Sunt autem quaedam quae simul nobis simul naturae cognita, in quibus videlicet ex effectu non procedimus ad causam, nec a causa remeamus ad effectum, sed altero cognito cognoscitur et alterum." *Ex. Van.* V, 11; p. 744.

¹⁰³ Niphus, *op. cit.*, lib. i, text. 2, pp. 8a-b. Note especially, "... Dicerem igitur media mathematica esse naturae nota per se, per accidens vero, non quatenus media, sed quatenus possunt scribi in pulvere, sunt nota nobis. Averroes vero opinatus est enuntiatum Aristotelis esse legendum indefinite, et sic hae duae subcontrariae sunt simul verae. Eadem non sunt nobis nota et naturae, ut in naturalibus: secunda, eadem sunt nobis nota [et naturae], ut in mathematicis: ubi medium quatenus causa est, naturae notum dicitur, quatenus vero accidens per se sensibile, nobis notum dicitur, qua ratione evenit, ut in illis non fiant duo processus, sed unus tantum e causa ad effectum." Cf. Averroes' commentary on this same text (*ed. cit.*, IV, fol. 6^{vb}).

only by knowing the sensible objects in which they inhere. They are abstracted from natural things and cannot be known separate from sensible objects.¹⁰⁴

Here our author has taken a more extreme position than Aristotle regarding the empirical nature of mathematical notions.¹⁰⁵ Again, we must not take such statements too seriously, for certainly Pico adopts this position only to refute his adversaries, even though it is not consistent with what he says elsewhere. This is certainly not the position we would expect him to take here, but it must have been what seemed to him the easiest way to demolish the distinction between "mathematical" and "natural" objects upon which his opponents' argument depends. The second possible objection which might be brought against Pico's arguments he states as follows:

The second, that from regress, and, as they themselves say, by examination, a clearer and more evident knowledge of the cause is acquired. Indeed, if we have rejected these two things, they have either nothing or very little upon which to base themselves.¹⁰⁶

Nifo's treatment of the various ways of attaining knowledge seems to be extremely close to the opposition here anticipated by the younger Pico.¹⁰⁷ One of the four ways to knowledge mentioned by Nifo is knowledge "of the same cause through an examination (*negociatio*) of the intellect, from which at first the knowledge of the cause increases in such a way to be worthy to serve as the middle term in a demonstration *simpliciter*."¹⁰⁸ The method of *negociatio* is through composition and

¹⁰⁴ "Nam nihil tale est in rebus quae sub obtutum cadunt, quod et nobis simul et naturae sit notum, si ab Aristotele nolunt recedere, apud quem in principiis physicis illud potissimum ponitur innatam esse nobis viam a notioribus nobis ad ea quae sunt ipsi notiora naturae. Nec mathematica nobis ingeras, cum quod naturalia ita non sunt, ut etiam diversa putentur, diversaeque de utrisque scientiae constituentur, tum quod super rebus etiam naturalibus, si quicquam habent pensi omnino fundantur, quomodo enim circulum aut triangulum (verbi causa) cognoveris, nisi prius ea delineata fuerint in sensili materia. Et numerum pariter quo pacto animo capies, nisi res numeratas apprehenderis. Quapropter dicuntur abstrahi a naturalibus rebus ea quibus mathematicarum nomen obtigit." *Ex. Van.*, V, 11; p. 744.

¹⁰⁵ Aristotle discusses the question of the status of mathematical concepts most fully in the last two books of the *Metaphysics*. His position is not completely clear, for he rejects both the view that mathematical objects exist apart from sensible things (Platonist-Pythagorean view) and that they are in sensible things.

¹⁰⁶ "Secundum quia ex regressu illo et ut ipsi loquuntur negociatione acquiritur causae notitia quae prius clarior et dilucidior, quae quidem duo si reprobaverimus vel nihil vel certe parum habituri sunt quo nitantur." *Ex. Van.*, V, 11; p. 744. Again Pico is indebted to Sextus. Cf. *Outlines of Pyrrhonism*, I, 164-72; *ed. cit.*, I, pp. 94-97 on "regress." See also William F. Edwards, *op. cit.*, pp. 256-86 where Zabarella's *De regressu* is discussed.

¹⁰⁷ Nifo's discussion of the salient points is treated in Randall, *op. cit.*, pp. 42-47. We here touch on Nifo's discussion only in so far as it relates to what Pico has to say.

¹⁰⁸ "... est eiusdem causae per intellectus negociationem, ex qua dum prima crescit notitia causae in tantum, ut digna sit effici medium demonstrationis simpliciter." Niphus, *op. cit.*, lib. I, text 4, p. 12b.

division. After the cause of something has been discovered, a clearer knowledge of it is obtained by examination.¹⁰⁹

Nifo also defends the notion of "regress," that is the "double procedure" of effect to cause and cause to effect. He argues that it is not a circular argument as some hold, but rather a legitimate method of scientific procedure.¹¹⁰ The method of "regress" Pico has rejected as being nothing more than a circular proof,¹¹¹ and he does not elaborate further on it. He says something more concerning the method of *negociatio*, however. No further examination of the cause, he argues, will ever reveal more information about it than do the effects. For if one tries to learn something further, he will encounter the problems which have already been pointed out, e.g. the problem of learning about the essence from accidental properties.¹¹²

We see that essentially all of Pico's objections to demonstration and methodological procedure are reducible to his rejection of sense knowledge as a legitimate source of information. As the methodology of the Italian Aristotelians evolved it began to take on an increasingly empirical aspect. The distinction between mathematical and physical demonstration became more clear cut. The "double procedure" of *regressus* became more and more a central notion of physical demonstration. In sum, the procedures in physics began to rely increasingly on the raw materials of empirical data. It was to such a state of affairs that Gianfrancesco hoped to come as "voice in the wilderness," so to speak, to offer the sceptical arguments against such a methodology. In large part his critique failed to stem the rising tide of materialism – or atheism, as he, in terms not too different from Berkeley, thought. In fact, the same scepticism which Pico utilized to combat Aristotelian science, was later enlisted by a man like Pierre Gassendi in the service of the "new science." But that is another story and we will save the discussion of it until later.

¹⁰⁹ *Ibid.*, pp. 12b–13a. Cf. Randall, *op. cit.*, pp. 42–47.

¹¹⁰ *Ibid.*, p. 12. Cf. Randall, *op. cit.*, pp. 42–47. Also see the opinions of other Aristotelians on the matter in Randall, pp. 38–41. That "regress" involves circular reasoning had already been argued by the ancient sceptics. See the passage from Sextus cited in note 106.

¹¹¹ See above p. 114 and note 99.

¹¹² "... effectus illi ... et quod attinet ad illiam suam negociationem nihil certe (ut mihi, ut aliis etiam videtur) lucratur ... Nunquam etiam causa sese illis patefaciet magis quam effectus, ipsius videlicet index assiduus et si Aristoteles vere hac in re decrevit, necessarius; quod si cognita re, quae est causa, et cognita re quae est effectus, posse a te effectum in causam referri dixeris, eadem te difficultates circumstabunt, quas initio capitis huius tetigimus; nam tu ipsas res sensu prius cognoveris et coniectura deprehenderis, intermediis accidentibus; unde si quicquam demonstrare volueris, ad effectum et sensus notitiam pro certitudine habenda, nisi ab Aristotele desciscas, illico tibi recurrendum fuerit." *Ex. Van.*, V, 11; P. 744.

(6) *The Fifth Way*

As we have already said, the universal propositions upon which Aristotelian science is based are derived from sense experience by what amounts to induction. Aristotle discusses this at some length in the *Posterior Analytics*. Pico, however, argues that induction does not necessarily give true universal propositions, but may – and often does – give propositions which have a taint of error. Moreover, if the universal propositions are not correct, the whole procedure of syllogism and proof is rendered false. Let us consider a demonstration such as:

All men are mortal.
Socrates is a man.
Therefore, Socrates is mortal.

It is necessary that the premise “All men are mortal” be always true. If this is not so, the whole proof crumbles. Our author maintains that the method by which such universal propositions are obtained is one that is not entirely reliable and, consequently, all proofs that follow from universal propositions so obtained are equally unreliable.

Definitions and sense knowledge have been shown to be uncertain, Pico begins. Now we must turn to other considerations:

It remains for us to show that the general procedure and end [i.e. of demonstration] are uncertain. That is, the proper attribute of the subject, which is said to be demonstrated, and the universal propositions, which are most required for demonstration, are uncertain. Hence, Aristotle said that the propositions upon which demonstration is based must be specifically and universally so, since it is inferred in the conclusion itself – that is, the end or completion of demonstration – that such a property belongs to each subject in the species. It can only be deduced, however, from propositions which precede the conclusion. Consequently, it is appropriate that those propositions and assumptions which constitute the argument are universal and relate to each individual. But those propositions which Aristotle thought must necessarily be both certain and universal we shall prove to be by no means certain, especially those which are called affirmative. But, according to Aristotle, no demonstration can be carried out without two, or at least one, affirmative proposition.¹¹³

¹¹³ “Restat enim ut progressum etiam universum et finem monstremus incertum, hoc est, incertam esse affectionem illam subiecti propriam, quae dicitur demonstrari, et universales propositiones quae maxime per demonstrationem exiguntur, idque in ipsa specie et universim, adeo ut Aristoteles, propterea censuerit propositiones, quibus demonstratio conficitur, de omni dici oportere, quoniam omni etiam subiecto talem affectionem speciatim inesse ipsa in conclusione, hoc est, demonstrationis fine terminove colligitur. Colligi autem nequit, nisi ex propositionibus, quae ipsam praecedunt conclusionem. Quapropter et illas ipsas, quae negocium conficiunt propositiones assumptionesque et de omni et universales esse convenit. Has ergo propositiones quas et certas et universales esse oportere censuit Aristoteles, minime

The propositions necessary for scientific demonstration are attained through induction according to Aristotle.¹¹⁴ Pico argues that we cannot reach such universal propositions with any degree of certainty, because they are based on induction which is itself uncertain. Nor can we know these propositions *a priori*, for they would not be derived by the method advanced by Aristotle; but, they would be known through the *lumen naturale*.¹¹⁵

Why does Pico object to induction? Knowing what he has said on the other topics we have discussed, we can almost determine beforehand what his position will be. First of all, our author does not have much that is original or striking to say about the subject, but rather gives some of the standard arguments against it. While his arguments do not show a great deal of originality there are certain emphases and methods of arguing that are not without interest. Therefore, we shall give some attention to his words.

The "problem of induction" is one which has vexed philosophers and theoreticians of science from Aristotle's day until our own. Many have had their doubts about the procedure,¹¹⁶ but nearly all have used it as the most satisfactory means at their disposal for approaching a certain class of problems. Certainly natural science is impossible without it. Our author is probably quite correct in holding that *certain* knowledge cannot be reached by induction. Assuredly many of his adversaries would not quarrel with him on this. It seems, however, that he goes to an uncommon extreme in his argument. But, as he has mentioned repeatedly, his aim is to destroy the foundations of natural knowledge and he is extreme in his application of the sceptical principles in attempting to do so.

We need not discuss in detail his views on the subject, but will merely give a few indications of the direction his polemic takes, focusing on what seem to be the most characteristic and interesting aspects of it. He argues in several places that a universal must be based on know-

certas convincemus; et maxime quae dicuntur affirmatrices, cum tamen sine duabus, vel ad minus sine altera, nequeat ulla, autore Aristotele, confici demonstratio . . ." *Ex. Van.*, V, 12; p. 746.

¹¹⁴ *Post. An.* 100b3-4.

¹¹⁵ "At quo pacto certam universalem probationem habebimus, cum incerta sit ars inductionis, sine qua incerta est universalis propositio? Si dixeris universalem propositionem te a priori (ut aiunt) probaturum te ipsum Aristotelis autoritate repellam, non qua nuper sumus multipliciter usi, sed qua priores eas et nullo intermedio probandas voluit, neque admisit, ut communes illae animi conceptiones omnibus notae demonstrationem ipsam proprie ingrederentur, quas quidem initio operis satis inuimus non Aristotelis doctrina, sed naturalis luminis beneficio cognosci." *Ex. Van.*, V, 12; pp. 746-47.

¹¹⁶ Pico cites quite a number, including Themistius, Philoponus, Boethius and Thomas.

ledge of all of the individuals and not merely on some of them, regardless of how many individuals there happen to be. As long as one individual remains unknown, the universal is in doubt.¹¹⁷ This is, of course, the basic argument against induction and one which seems always to have been known to philosophers. There is nothing particularly novel in Pico's use of it. It should be noted, however, that there are few who insist on it so strongly as he does. His feeling on the matter certainly reflects the same strong opinion that we find expressed by the ancient sceptics.¹¹⁸ Pico supports this criticism of induction by citing several examples where commonly held "universal propositions" are not really universal. For example, the old logical proposition of "All crows are black" is disputed since some white crows have been found.¹¹⁹ Or there is the famous case of the crocodile which renders false the universal proposition that "All animals move their lower jaw," another favorite example of philosophers throughout history.¹²⁰

Our author also takes great pains to show that certain commonly held opinions are not always true, because exceptional cases arise. This is something that he insists on often throughout his writings. For example, it is generally thought that poisons are harmful to everyone, but Gianfrancesco argues that this is not the case. He cites examples to the contrary from a variety of sources.¹²¹ These and other things make it very difficult to generalize about any subject, he concludes. Pico's position on the matter is simple and straightforward, "No proposition is

¹¹⁷ "Dices si duorum vel trium individuorum proprietatem affectionemve cognovero, cur et illa aliis etiam individuis inesse non collegero? Illo, inquam, pacto non collegeris, quo si tres vel quatuor, addo et centum et mille etiam Myriadas hominum, albo colore, succulenta et vivida carne, promissoque capillo spectaveris, omnes propterea collegisse ita esse homines affectos non potuisti." *Ex. Van.*, V, 12; p. 748. Cf. also p. 750.

The notion that the universal is derived from merely two or three cases quite possibly derives from Pico's reading of the Peripatetics, who, usually when discussing induction, mention only two or three particulars in the examples they give. For example, they say that we learn the universal "man" from knowledge of Socrates, Callias, etc. Such an example is to be found in Themistius' Paraphrase of the *Posterior Analytics* II, cap. 35 (in *Themistii philosophi acutissimi Commentaria* (Venice, 1520), fol. 11^{vb}; this is Ermolao Barbaro's translation often cited by Gianfrancesco) or Nifo's commentary on the same text (in *Augustinus Suessanus Super Posteriora Aristotelis* (Venice, 1572), lib. II, com. 144, fol. 83^{va}).

¹¹⁸ See Sextus Empiricus, *Outlines of Pyrrhonism* II, 195-204 (Loeb ed., I, pp. 276-83). Especially note section 204 where the two basic reasons for rejecting induction are given. These are (1.) if only a part of the individuals are used in formulating the universal, one of those omitted may contradict it; and (2.) if it is attempted to use all of the individuals, there are an infinity of them and hence it is impossible.

¹¹⁹ *Ex. Van.*, V, 12; p. 749; See also V, 5; pp. 719-20 where this is discussed at length.

¹²⁰ *Ibid.*, V, 13; p. 753; mentioned in *Outlines of Pyrrhonism* II, 195 (ed. cit., I, pp. 276-77).

¹²¹ *Ex. Van.*, V, 13; pp. 756-57; also II, 22; pp. 562-63. Pico was fascinated by the subject of poisons as were many of his predecessors and contemporaries. See Thorndike, *op. cit.*, V, pp. 472-87, and *passim* for a consideration of some of the many discussions on this subject during the later Middle Ages.

truly and without qualification universal, which is not either said of each individual or is said of none of them."¹²² He again tries to anticipate the objections which others may have to his own views; and, in doing so, he shows a certain grasp of the problems involved, which indicates that he was not so naive a thinker as it sometimes appears. He says, for instance, that it may be argued that neither he nor anyone else can improve the method of induction, for it is based on the observation of very many, if not all, men for many centuries. Our author says that certain qualifications are in order if this claim is to be acceptable. Perhaps these previous observations have been made through simple human faith and include only the favorable cases and not the unfavorable ones, he argues. Furthermore, the observers may have been deceived by their own senses or by their faith in past observations. An example of this is to be seen in the case of the motion of heavenly bodies, which is not at all as it has previously been reported.¹²³ Such a statement shows a certain amount of philosophical sophistication which at other times Gianfrancesco seems to lack. Particularly interesting is the use here of an empirical example over which there has been some disagreement. This must certainly count as a premonition – albeit a very faint one – of the use to which sceptical doubt will be put in the next century when it will lead to a radical form of empiricism which will have an important role in philosophy and science in the seventeenth and later centuries.¹²⁴

On the other hand, the entire rejection of induction reveals a wholly unscientific and non-empirical attitude. Pico was not seriously interested in discussing the problem of induction, it seems certain. Induction, like most of the other topics of which he speaks, is not one that offers him an intellectual challenge and incites him to find an answer. Rather, it is but another opportunity to apply the sceptical critique to contemporary Aristotelianism. If he makes remarks concerning the problem which appear unusual or interesting to us, it must be realized

¹²² "... nullam propositionem vere et simpliciter esse universalem, quae vel non dicatur de omni ... vel de nullo ..." *Ex. Van.*, V, 12; p. 753.

¹²³ "At dicet quispiam sit aut ego aut alius inductionem perficere nequivero, tamen multis retro saeculis, ab omnibus, vel plurimis, hoc vel illo observatum est modo: quare universim potero ego colligere, etiamsi universim singula non percensuerim. Sed non est ita, namque ad historiam te aliorum remittis observatorum et fide simplici humana ducis, et praeterea non omnes potuisti observatores percalluisse, quid si alii diverse observaverunt? quid si decepti sunt vel proprio sensu vel fide historiae? Ut in deprachendendis motibus globorum coelestium multos non recte recensuisse, quod observatum fuerat, retro est a nobis comprobatum." *Ex. Van.*, V, 13; p. 754.

¹²⁴ This has recently been pointed out in the case of Mersenne and Gassendi. See particularly Richard H. Popkin, *The History of Scepticism from Erasmus to Descartes* (Assen, 1960), pp. 131–53, and Tullio Gregory, *Scetticismo ed Empirismo: studio su Gassendi* (Bari, 1961).

that they are cast in a framework that is basically backward-looking rather than forward-looking.

(7) *General Conclusion to the Chapter*

From our detailed analysis of Pico della Mirandola's critique of the Peripatetic notion of *scientia* a number of more general conclusions can be drawn concerning his own philosophical orientation. It becomes increasingly apparent upon reading Book V of the *Examen Vanitatis* that the author's overall attempt is to reduce all forms of knowledge realizable within the framework of Aristotelian philosophy to the single source of sense experience. On his ability to do this rest in large measure the debilitating results he will obtain. It is not our task here to say whether in fact this was Aristotle's view or not, but, suffice it to say, that his writings can be interpreted in that way and many of his most competent and penetrating commentators have considered this interpretation to be valid.

Although Pico is not consistent in this – as we saw in his reliance on the Thomistic interpretation of Aristotle in some instances – he tends for the most part to hold such a view. Precisely why he was led to interpret Aristotle in such a radically empirical way is not altogether clear. The solution certainly lies in the fact that he chose at one point to consider Aristotle as the enemy and thenceforth tried to develop a method of attacking him. It is certainly true that Christian thinkers more friendly to the Stagirite have tended to bend Aristotle toward a less empirical, more Platonic viewpoint in the process of making him more Christian and theological than in fact he was. Pico, on the other hand, wanted to make Aristotle appear as hostile as possible to Christian theology and tended to make him a complete empiricist in whose philosophy was left no room for faith. In Gianfrancesco we have a reversal of the thirteenth century process of assimilation of Aristotle into the Christian tradition – his “canonization” as some hold. With the younger Pico, Aristotle becomes the enemy of Christianity – he is “diabolized,” as it were.

Let us for a moment consider the effect of this. An undercurrent of opposition to Aristotle and to his philosophy was practically never absent from the death of the Stagirite until the publication of the *Examen Vanitatis*. From the twelfth century onward, however, the interest in and reliance on Aristotle became increasingly great in Christian Europe. The high point of such influence might be considered the famous “five ways” of St. Thomas where basically Aristotelian notions

were employed to formulate arguments for the existence of God. These proofs had already been criticized before Pico's time by Scotus, Ockham, and others within less than a century after their formulation by the Angelic Doctor. In the early years of the sixteenth century, Gianfrancesco Pico also speaks of "five ways"; but these are five ways to destroy the very foundation of Aristotelian philosophy upon which Thomas built. To go too far in insisting on the comparison of the "five ways" of the two authors separated by two and a half centuries would be arbitrary and capricious. But if we consider the two opposed attitudes of these men briefly, some light should be shed on the significance and individuality of Pico's position.

Thomas had hoped to make God demonstrable by the techniques of Aristotelian philosophy and thereby convince the unbeliever. Gianfrancesco Pico held that Aristotelian proof offered no legitimate demonstration at all, re-echoing Ambrose's outcry that "Non in dialectica complacuit Deo facere saluum populum suum." In place of Thomas' rational and philosophical approach to religious knowledge, Pico affirms the sole legitimacy of faith in religious matters and retreats into the sealed compartment of "fideism." Aristotle is no longer a member of the Church Militant, but becomes one of its bitterest enemies. Aristotle's proof becomes no proof at all, but merely argumentation based on illusory data. The cycle is complete. The "five ways" of Thomas have made Aristotle a Christian, the "five ways" of Gianfrancesco Pico have made the sceptic a Christian. Instead of leading to God as Thomas had held, the Aristotelian techniques lead away from him, Pico argues; they are based on illusion and can lead only to illusory knowledge. Such illusory knowledge can serve no useful purpose and must be recognized for what it is. Pico clearly rejects the Thomistic approach to God through reason, just as Crescas had rejected Maimonides' proofs before in the Jewish tradition.¹²⁵

The emphasis on sense knowledge to which the Aristotelian philosophy leads is of no avail to the Christian. This is something that Gianfrancesco feels compelled to reiterate time and again. That the failure of Aristotelianism is actually rooted in its foundation on the data of the sense world, is a conclusion that Pico reached slowly, as we have seen. It is something, however, that he does not let the reader of the *Examen Vanitatis* forget. "He denies Aristotle, who holds that all human cognition does not have its origin and basis in sense," ¹²⁶ our author says.

¹²⁵ See Wolfson, *op. cit.*, and our discussion of the relation of Crescas to Pico in chapter V of the present study.

¹²⁶ *Ex. Van.*, V, 13; p. 758.

The destruction of Aristotle has been completed, Pico feels, for (1) according to the Stagirite all knowledge is from sense and (2) according to the sceptic's destructive criticism it has been shown that all knowledge derived from sense is untrustworthy.

Although our author's critique of Aristotelian "science" does have a certain force and explores some of the assumptions and preconceptions upon which demonstrative science is based, the critical remarks do not themselves exhibit an internal consistency of their own. Certainly Gianfrancesco Pico raises a number of interesting questions which do not find an immediate answer in the Aristotelian canon, but it must be admitted that the critique amounts largely to rejecting a number of individual Aristotelian principles with little attempt to suggest better principles to replace those rejected. The rejections are not consistent or systematic. They often presuppose a Platonic outlook, but not always – as, for example, in the case of the critique of the Aristotelian view of mathematical demonstration. Often the arguments given to refute Aristotle are quite as dependent on sense data as those criticized. Furthermore, it is everywhere evident that many of the presuppositions upon which Pico's critique is based are nothing other than the principles of Aristotle's own philosophy. Pico often lashes out at one part of the philosophy with a weapon fashioned by the very philosophy he is attacking.

But this very lack of consistency belies some of the more important observations that can be made about it. Main among these is the fact that Gianfrancesco is at the same time anti-intellectual and philosophical. Although his procedure has a certain mystical element which considers scientific and philosophical knowledge to be of no avail when the One and Reality are confronted, there is also a genuinely philosophical approach to the problem at hand. His approach to the "vain philosophy of the Gentiles" bears certain similarities to the attitudes of Tertullian, Bernard of Clairvaux, Savonarola, and many other Christians who have engaged in a combat with secular learning. What is interesting in Pico's case is that, at the same time, he argues against specific philosophical problems. His own training prepared him well for this. He shows a clear awareness of the philosophical currents of his time and, if sometimes he misinterprets a thinker on an issue, more often he is able to relate them to their historical and intellectual context quite accurately. As Berkeley will do, he feels it necessary actually to point out what is wrong with the current philosophy, if the anti-religious aspects are to be rooted out. But, unlike Berkeley, he cannot

offer a philosophical alternative that will eliminate the undesirable characteristics of the philosophy being opposed.

Evident throughout his destructive remarks concerning *scientia* is the already mentioned contrast between sensibles and essences. This is a problem which Pico feels to be inherent in the Peripatetic approach to philosophy and one for which he can offer no solution. Knowledge of essences and knowledge of sensibles form two worlds which cannot be conjoined. The sceptic had argued that sense knowledge is unreliable: Pico does likewise, but adds a proviso that allows for a Christian God, and for faith and prophecy. Such a solution is possible, but it leaves one without any real operational procedure – “pragmatic” or otherwise – with which to approach the affairs of everyday life. It is, in a word, impractical. All science, all knowledge *ex puris naturalibus*, has been questioned and nothing has been given to replace it. Pico’s answer to Aristotle may offer a religious solution, but offers no practical philosophical solution. This is merely a further indication of the fact that Gianfrancesco was not interested in replacing Aristotelianism with an alternative, but only in seeing to its downfall.

The very attitude expressed in the pages we have just discussed indicates something important about the philosophical environment of sixteenth century Italy. Even allowing for exaggeration and hyperbole on Pico’s part, the empirical orientation of the Italian Aristotelians of the time must have been quite strong. This has already been signalled by Nardi, Randall, and others, but the vehemence of Pico’s opposing attitude gives another indication of the situation. Gianfrancesco Pico was perhaps alone in opposing these thinkers, but there is something in his polemic that indicates that he had a reasonable understanding of the current situation.

Another thing that emerges from Pico’s critique, although not manifest particularly in him, is that in it is indicated the concern which grows in the course of the sixteenth and seventeenth centuries for the relation of man to the other animals. His repetition of the stories from various sources on the intelligence of animals when compared to man finds its way ultimately to Gassendi and seventeenth century psychology and physiology.¹²⁷ When Pico discusses the fact that possibly

¹²⁷ On Gassendi’s importance in this respect see the interesting example given in Paul F. Crane-field, “A Seventeenth Century View of Mental Deficiency and Schizophrenia: Thomas Willis on ‘Stupidity and Foolishness,’” in *Bulletin of the History of Medicine* XXXV (1961), pp. 291–316, esp. pp. 292, 305–306. It is also interesting to note that Pico’s correspondent, Girolamo Rorario, was the author of a work on the intelligence of animals (dated 1547) See Hieronymi Rorarii, *Quod animalia bruta ratione utantur melius homine* (Paris, 1648), the first

man is not the only rational animal ¹²⁸ he is perhaps unwittingly paving the way for a more empirical approach to the study of intelligence. We are not here saying that such influence by Pico was necessarily direct, but it indicates one direction in which his sceptical attitude can be developed.

Included in Pico's sceptical outlook is a strong tendency to pick out the exceptions to general rules. For example, a known poison is almost always harmful to human beings. There may be one or two exceptions, however, to such a rule. It is on these exceptions that Pico fixes his attention. "Does not such a thing invalidate the theory that the poison is harmful?," he asks. Does it not further show that such theorizing and attempts to formulate general rules and universal propositions is hopeless? This is the end of Pico's scepticism. From such instances, he comes swiftly to the conclusion that reliable knowledge is not to be had from the materials available to man from the physical world. Certainty is to be derived only from the Beyond. It is in Revelation where truth is to be found. In this there are no exceptions. It is true because it is the Word of God. Consequently, we must conclude that it is foolhardy and distracting to look elsewhere for *sincera veritas*.

But scepticism is a many-pronged fork. What made Pico a fervent believer in Christianity, made Hume as fervent a disbeliever in all religion. What made Pico singularly unsympathetic to natural philosophy, made Gassendi a diligent observer and acute formulator of a "mitigated scepticism," where to the uncertainty of sense knowledge could be attached a certain degree of probability. The line between constructive and destructive scepticism is a thin one, often difficult to detect, and always more difficult to defend rationally.

To Pico, the exceptions to general rules of which we spoke above meant only the destruction of the general rule. When he had shown that a sufficient number of these are invalid, down tumbled the whole structure of Aristotelian science – or so he thought. But let us reflect for an instant. Can not such destruction lead to a reformulation of concepts? Can not the antithesis lead also to a synthesis? The answer to both of these is "yes." Although Pico did not look in that direction others did. If there are exceptions, why are there exceptions, they asked? Can not a new general rule be formulated to include the ex-

printing, edited by Gabriel Naudé. The book was reprinted at Amsterdam in 1654 and 1666 and at Helmstedt in 1728. Bayle devoted a long article to Rorario and his work. See Pierre Bayle, *Dictionnaire historique et critique*, new ed. (Paris, 1820), XII, pp. 588–622.

¹²⁸ *Ex. Van.*, V, 8; pp. 731–33. The example of the prudence and intelligence of animals are drawn from a wide range of sources.

ception? Or, if not, do we not look at the exception and see why it does not fit into the general classification? It is in this way that the scepticism of the early modern period led to a progress and a development in these observational disciplines which we call with misleading ambiguity "modern science." In this Pico had no part, but some of those who read and profited from him did.

THE CRITIQUE OF ARISTOTLE'S PHYSICS

Tanta est certe Aristotelis amplitudo atque autoritas, ut difficillimum ac periculosum sit quidpiam scribere contra quam ipse docuerit, et mihi praesertim cui semper visa est viri illius sapientia admirabilis. Verumtamen studio veritatis impulsus, cuius ipse amore in seipsum si viveret excitaretur, in medium proferre non dubitavi, in quibus me inconcussa mathematicae philosophiae basis, cui semper insisto, ab eo dissentire coegit.

Giambattista Benedetti, Diversarum speculationum mathematicarum et physicarum liber
(1585).

(1) *Introduction*

Having completed his critique of scientific demonstration, Gianfrancesco Pico next sets his sights on certain other doctrines of Aristotle, which he considers to be in error. In Book VI of the *Examen Vanitatis*, our author focuses upon some of the weak points he finds in the Aristotelian system.

In discussing these specific philosophical problems, our author is not so sceptical as he was when arguing against "scientific demonstration." He here sometimes endorses an alternative philosophical position to replace the Aristotelian one which he opposes. Aristotle and the Aristotelians still receive the brunt of the attack, but occasionally Pico defends the position of another philosopher with such conviction that one might suppose that he is actually adopting this position to replace the Aristotelian one which he has rejected. Still his endeavor is largely critical. Although he may seem to be in agreement with Philoponus or Crescas, his principal aim is to show the errors of Peripatetic philosophy. In conclusion to this task, Pico attempts to refute certain individual doctrines, which he contends are in error because they themselves have been improperly demonstrated.¹

¹ "Hactenus demonstrandi artem ab Aristotele positam, multa labare vanitate demonstravimus, quintoque operis libro terminum posuimus. Restat ut male demonstrasse, quae se ille recte putaverat, aperiamus et reliquas etiam vanitates insinemus, ut explodantur." *Ex. Van.*, VI, 1; p. 761.

The criticisms contained in Book VI involve many Aristotelian writings – the *Ethics* as well as the *Physics*, and the *Metaphysics* as well as the *De Coelo* and *De Generatione*. We have chosen to discuss here, however, only those which deal specifically with the *Physics*. Our choice is somewhat arbitrary, but is also determined to a certain extent by both internal and external criteria. First of all, our author devotes more space to discussing Aristotle's natural philosophy than to the other branches of his system. Secondly, the sources from which he draws his criticisms have a special interest because of the incisiveness of the objections they raise against the Peripatetic teachings. Thirdly, the topics discussed by Pico are among those which became central to the discussions of natural philosophy in the centuries after the publication of the *Examen Vanitatis* and, when placed in their historical context, are of no small interest.

The first of these reasons is self-explanatory and there is no need to discuss it further. The second and third are in need of additional clarification. Gianfrancesco Pico draws his criticisms of Aristotle's physics principally from two sources, John Philoponus (fl. 529) and Hasdai Crescas (1340–1410). The first, John Philoponus, was certainly one of the most original minds of the late ancient world, and one whose importance is often bypassed in histories of philosophical and scientific thought. Still today there is no adequate study of the greater part of his work.² Among the most important contributions of the Grammarian, as he was called, are the long "digressions" in his commentary on the *Physics*, where he sharply disagrees with Aristotle on several issues. Particularly notable are the discussions of place and vacuum, about which we will have more to say below, and his discussion of projectile motion. Philoponus was little known throughout the Middle Ages, but some of his ideas had quite an impact on sixteenth century European thinkers when they were reintroduced.

² Of the most important general literature on Philoponus, we might mention W. Kroll, "Joannes Philoponus," in Pauly-Wissowa, *Real-Encyclopaedie*, ser. I, vol. IX (1916), cols. 1764–95; Gustave Bardy, "Jean Philopon," in *Dictionnaire de théologie catholique*, VIII (1924), cols. 831–39; Basile Nicolas Tatakis, *La philosophie byzantine* (Paris, 1949), pp. 39–50; S. Sambursky, *The Physical World of Late Antiquity* (London, 1962), pp. 154–75. On the knowledge of Philoponus during the Middle Ages see Martin Grabmann, "Mittelalterliche lateinische Uebersetzungen von Schriften der Aristoteles-Kommentatoren Johannes Philoponos, Alexander von Aphrodisias und Themistios," *Sitzungsberichte der Bayerischen Akademie der Wissenschaften, Philosophisch-historische Abteilung* (1929), Heft 7, esp. pp. 1–48. In his *De animae immortalitate*, Pico refers to Philoponus as "germanissimus peripateticus," an appellation the meaning of which should become apparent from what we say below. See *Ioannis Francisci Pici . . . De animae immortalitate digressio* (Bologna, 1523), fol. 7v. Pico seems to have been the first Western thinker after Antiquity to give serious attention to Philoponus' *Commentary on the Physics*. See below, esp. note 65. The influence of Philoponus on early modern natural philosophy and science has yet to be studied.

Hasdai Crescas³ also had an importance for the sixteenth century. His criticism of Aristotelian physics summed up this tendency in the Jewish tradition, with Crescas himself adding a certain amount of new material. His major work, *Or Adonai* (*The Light of the Lord*), apparently was not translated into a European language until the twentieth century. It was probably known to Pico through a Hebrew scholar.⁴ This work considers a number of physical problems, which were much discussed in the sixteenth century; and it quite probably exerted some influence on the thought of Giordano Bruno.

Gianfrancesco Pico's critique of Aristotle's *Physics* is also worthy of detailed examination because of the very importance of the particular issues involved. These are motion, time, place, and vacuum. Motion, it seems safe to generalize, was the key problem of physics discussed during the early years of the modern period. Mechanics was the first branch of physics to show itself capable of accurate and reproducible experimental and mathematical analysis. From Benedetti and Tartaglia to Galileo and Newton the study of mechanics gradually became a predictable, demonstrative science capable of mathematical analysis. The importance of time and space in the philosophies and sciences of Newton, Kant, and Einstein is too well known to require further comment. Notions of space in particular, underwent a tremendous change in the course of the sixteenth century and certain of the formulations of Philoponus, Crescas, and Pico had a central role in the transformation from the traditional Aristotelian conception to more modern views. Lastly, vacuum occupies an important position in the discussions of the sixteenth and seventeenth centuries, if for no other reason than because it was transformed from an essentially abstract concept of theoretical philosophy to a realizable actuality. "Vacuum" achieved a key role in early modern physics because it unmistakably represented the power of the "new science" to realize through mechanical manipulation that which hitherto had been spoken of only in vague and abstract terms. It became, in short, a symbol of the newly found idea of changing nature for one's own purpose, for, although "nature abhors a vacuum," by the proper use of mechanical devices, one can be created by man.

³ Harry A. Wolfson, *Crescas' Critique of Aristotle* (Cambridge, Mass. 1929). Further bibliography on various aspects of the man's life and work are to be found there.

⁴ This is Wolfson's supposition (*op. cit.*, p. 34), for he concludes that it is very doubtful whether Pico's knowledge of Hebrew was adequate to handle the difficult work of Crescas. A possible intermediary might have been Sante Pagnini, a renowned biblical scholar who was a correspondent of Gianfrancesco (see the letters in Pico, *Opera*, pp. 880-83). On their relations see Cecil Roth, *The Jews in the Renaissance* (Philadelphia, 1959), p. 146.

Gianfrancesco Pico discussed and transmitted a number of important ideas on these subjects. It appears, however, that he did not fully appreciate the significance of what he was doing. Certainly he had little interest either in the scientific or philosophical consequences of the ideas he was discussing. On the other hand, the very fact that he chose to discuss what he did is not without significance. It indicates that Pico had some realization of the meaning of the questions which he treated. His major aim in writing the *Examen Vanitatis* was to set forth material against Aristotle and the Aristotelians. As we have seen, his arguments are often superficial, but those which he raises against Aristotle's physics are almost always cogent, standing in the mainstream of early sixteenth century natural philosophy. If he was not an original thinker in these matters himself, here at least, he showed extremely good sense in selecting sources from which to draw his criticism.

(2) Motion

The first specific question which our author takes up in connection with Aristotle's *Physics* is that of motion. Aristotle's basic definition of motion is "the actualization of that which exists potentially."⁵ In the broadest sense motion embraces every type of change. It is the most general category with which the natural philosopher concerns himself. Motion is divided into four major categories (1.) quantitative motion (increase and decrease), (2.) qualitative motion (alteration), (3.) generation and corruption, and (4.) local motion. Aristotle says that, of these, only the latter type (local motion) is capable of continuing eternally and therefore is the only type of motion of which eternal beings are capable. And, only circular local motion has the quality of perfection which allows it to be eternal. It is, therefore, prior by nature to every other type of motion.⁶

It is with this last contention that Pico disagrees, saying that it is not true that local motion is prior to every other type of motion, as Aristotle holds. In fact, both qualitative and quantitative motion are prior to local motion.⁷ We shall describe in detail just how he argues his case.

⁵ ἡ τοῦ δυνάμει ὄντος ἐντελέχεια, ἣ τοιοῦτον, κίνησις ἐστίν *Physics* 201a10-11. The most complete discussion of motion in Aristotle is in Book III of the *Physics*, chapters 1-3. See William Barrett, *Aristotle's Analysis of Movement: Its Significance for Its Time* (New York, 1938) and Friedrich Solmsen, *Aristotle's System of the Physical World* (Ithaca, New York, 1960), pp. 174-265.

⁶ Book VIII of the *Physics* deals with eternal motion.

⁷ "Multa quoque de motu dogmata improbata sunt, inter quae illa: motum qui est ad locum priorem esse natura omni specie mutationis . . . Motus item qui spectatur in quanti-

According to the Aristotelian scheme, circular motion is the only type of motion that can continue eternally. All other types of motion can come to be and can pass away. This theory forms the basis of the Aristotelian argument for the eternity of the world. The eternal beings in the world, i.e. the animated spheres, each are moved in a uniform circular way by a "mover," and are composed of a fifth essence, which is subject neither to corruption nor to qualitative nor quantitative change. The motion of the spheres can continue forever without undergoing any other type of change. From this primal movement all other types of motion ultimately derive.

Pico, following the arguments of Crescas almost to the letter, argues for the non-eternity of the world. This he does by attempting to show that other types of motion can be eternal as well as circular local motion. If this can be done, Gianfrancesco feels, then the unique quality of circular motion will be challenged and the Aristotelian proof for the eternity of the world will be placed in doubt. Aristotle's doctrine has always been one of the major stumbling blocks in attempts to synthesize Aristotelian philosophy with Christian or Jewish theology, both of which steadfastly hold to the doctrine of creation *ex nihilo*. Attempts have been made by various Christian and Jewish theologians to interpret Aristotle in terms compatible with religious teaching. To Pico's mind these have not been successful. Rather than trying to integrate a part of Aristotle's teachings into Christianity, our author prefers to argue that the Stagirite's reasons for maintaining the eternity of the world are faulty. Gianfrancesco contends (1.) that circular motion is not necessarily prior to all other types of motion and (2.) that the Aristotelian arguments, showing that other types of motion cannot be eternal, are not conclusive. Pico does not try specifically to give a philosophical argument that circular motion is not eternal. Rather, he tries only to say that it is not impossible that other types of motion are eternal as well. Crescas went further and tried to show that the Aristotelian analysis, in which the different types of motion were arranged according to priority, was incorrect and actually inverted.⁸ Pico does not repeat this part of the argument, but is content to hold that Aristotle was incorrect in assigning a pre-eminent place to circular local

tate et in qualitate praecedere videtur eum, qui est ad locum, prius enim quantitate fulcitur et qualitatibus conditur, quam ut mutet locum." *Ex. Van.* VI, 2; p. 764. Cf. *Physics* 260a26-b5 and Crescas' Proposition XIV in Wolfson, *op. cit.*, pp. 280-83 and the corresponding notes.

⁸ Wolfson, *op. cit.*, pp. 282-83. Crescas does not argue the point in any great detail, however, and his argument is not particularly convincing.

motion. As a result of this, his proof for the eternity of the world is erroneous.

Following closely what Crescas said, Gianfrancesco argues in two main ways against the uniqueness of circular local motion. Both of these involve the development of arguments which are designed to show that other types of motion can qualify theoretically as eternal. That is to say, there is no reason *a priori* why other types of motion cannot continue for eternity as well as circular local motion. Pico first rejects the principle that "whatever is moved accidentally, necessarily must come to rest."⁹ The precise origin of this principle is not known, but it certainly is to be found in Averroes.¹⁰ This position was questioned by Crescas, who said that although it is true that no accidental motion can be eternal in itself, it is possible for an accidental motion to be eternal if it is inseparable from some eternal essential motion.¹¹ Gianfrancesco repeats the same argument, going so far as to repeat also the same example. He argues that it is possible that the motion of the "fiery sphere" (i.e. the sphere of fire which marks the boundary line between the corruptible sub-lunar world and the non-corruptible celestial world), whose motion is determined by the eternal motion of a celestial sphere, could also have eternal motion, although such motion would be *per accidens* and not *per se*.¹²

Secondly, it is argued that other types of motion besides circular motion can be continuous. Aristotle held this to be impossible, because every other type of motion proceeds from a *terminus a quo* to a *terminus ad quem* and when the latter is reached the motion stops. Aristotle further argued that there cannot be a continuity of motion between opposite motions, for there must always be an instant of rest between one opposite and another (e.g. if an object which is becoming black begins to whiten, there must be a rest between the two processes of whitening and blackening).¹³ Crescas and Pico give two objections to this. First,

⁹ Probably based on *Physics* 256b9-10, as Wolfson (p. 551) says.

¹⁰ "Cum posuerimus quod iste motor non movet, nisi moveatur, et posuerimus ipsum moveri per accidens, possibile est ut aliqua hora veniat, in qua non movebitur, quod enim est per accidens, non est semper neque necessarium. Et cum fuerit possibile ut non moveatur, erit possibile ut non moveat, cum sit ita, quod suum moveri est necessarium in suo movere." *Comm. in libros physicorum* VIII, text. 36, ed. cit., IV, fol. 375^{vb}. See Wolfson, *op. cit.*, pp. 551-55.

¹¹ Proposition VIII in Wolfson, *op. cit.*, pp. 248-53 and corresponding notes.

¹² "Falsum quoque et illud esse Hebraeus Hasdai contendit, quicquid ex accidenti movetur, quandoque necessario quiescere. Nam ex Aristoteleo dogmate sphaera ignis ex accidenti mota, videlicet ad orbis superioris motum, non quiescet coelo agitato; quod noluit Aristoteles posse quiescere. Superficies quoque coeli extrema et partes ipsius semper agitatae non ex se, sed ex accidenti ad motum corporis in quo sunt moventur." *Ex. Van.*, VI, 2; p. 764.

¹³ *Physics* 261a3-b7. Also see Averroes' commentary on this text, ed. cit., IV, fols. 401^{ra}-

taking the example of the black and white, they say that it is not true, that if an object, which is becoming white, begins to become blacker, that there will have necessarily been two separate motions (whitening and blackening), separated by an interval of rest, as Aristotle and Averroes had said. Nor would the absurdity follow that, if there were no period of rest, the object would be whitening and blackening at the same time. Instead, these two processes must be considered as different aspects of the same motion, separated by the *now* which makes up the *terminus ad quem* of the one and the *terminus a quo* of the other.¹⁴ Secondly, the same thing is true in the case of rectilinear motion. If Aristotle's analysis of the problem were correct, it would follow that if a very light object were moving upward and suddenly a very heavy object, such as a mountain, descended upon it, an instant in which both were stationary would be necessary. According to Aristotle, this would be because the lighter object would successively undergo two opposite motions and, consequently, they must be separated by an instant of rest. But, Pico contends, this obviously would not be the case and therefore Aristotle's theory is not correct.¹⁵

By these two rather convincing arguments, Pico feels that he has succeeded in showing that qualitative motion and rectilinear motion as well as circular motion can be eternal. He has not proven that these are actually eternal, but he has tried to show that there is no theoretical reason why they should not be eternal. He has not proven precisely that quantitative and qualitative motion are necessarily prior to local motion, as he said that he would do. Rather he has shown – if his arguments are considered convincing – that circular motion does not have a unique claim to eternity. If other types of motion can be eternal as well as circular motion, the Aristotelian argument for the eternity of

402^{vb}. The example of motion from black to white, which will be used also by Crescas and Pico, is to be found on 402^r.

¹⁴ "Non recipitur et illud, solum motum orbicularem esse continuum, atque rationes Aristotelis quibus id probare sategerat fabulas appellat Hasdai; et nigrum cum movetur ad albedinem licet non quiescat in ea, sed denigretur, non tamen sequitur propterea ut dealbetur simul et denigretur, sed ratione diversa, hoc est quantenus dealbatur potest id asseri et quatenus denigratur hoc etiam potest affirmari: nec absurdum est ullum." *Ex. Van.*, VI, 2; p. 764. Crescas' argument, which is more detailed and easier to follow, is in Wolfson, *op. cit.*, pp. 272–81 (Proposition XIII) and corresponding notes. Esp. see note 20, pp. 623–25 which clarifies the argument and points out the analogy between it and Aristotle's own argument for a single continuous motion (*Physics* 263b9–15). This seems to have been a widely discussed problem in the Middle Ages. See Alexandre Koyré, "Le vide et l'espace infini au XIV^e siècle," in his *Études d'histoire de la pensée philosophique* (Paris, 1961) p. 57.

¹⁵ "Illud quoque falsum inter duos contrarios motus necessario quietem intercedere, alioqui sequeretur ut pondus ingens, ut mons altissimus, super re levissima ascendente procumbens, sisteret motum et quietis interponeret morulam et ipso in aere conquiesceret." *Ex. Van.*, VI, 2; pp. 764–65. For the use of this argument by later thinkers see below pp. 135–36.

the world is weakened somewhat. Although, as we have said, Crescas went on to argue that other types of motion are prior to circular motion, Gianfrancesco does not fully draw out this implication. Crescas had contended that generation is the primary form of motion, thus opening the way very definitely for creation *ex nihilo*. Pico, however, is content to pursue the matter no further, having shown that other types of motion as well as circular motion can be eternal.

What are the results of Pico's efforts? First, he has attempted to show that an eternal motion does not necessarily have to be a motion eternal *per se*, but can be an accidental motion dependent on another motion which is itself eternal *per se*. Secondly, he has tried to show that various types of motion – and not just uniform circular motion – can be eternal. The implication of this is that the Aristotelian position, which argues for the eternity of the world by demonstrating the uniqueness of one type of eternal motion, must be re-evaluated. But, aside from the obviously theological implications of our author's discussion, certain of his counter arguments against Aristotle are not without philosophical and physical significance.

After many new things had been said about motion and mechanics in the course of the fourteenth century, discussion on the subject apparently showed few signs of originality and vitality through the fifteenth and part of the sixteenth centuries. Men like Leonardo da Vinci in the beginning and Giambattista Benedetti and Niccolò Tartaglia in the middle of the sixteenth century began with renewed interest to investigate some of the problems studied by the fourteenth century Parisian natural philosophers. Others in the same century spoke of motion in more traditional terms but, nevertheless with some originality. Finally, it was Galileo in the late 1580's, who brilliantly studied some of the problems of motion, and began his revision of the entire methodology of mechanics by utilizing mathematical procedures to study the "laws of motion." Although in his later works Galileo speaks of mechanics in terms approaching those we see today in a textbook of elementary physics, his early works show a greater connection with the past. It is to these latter that we shall now turn.

In his early work, *De Motu* (ca. 1590),¹⁶ the great physicist devotes an entire chapter to discussing whether there is an instant of rest when two

¹⁶ Printed in the Edizione Nazionale, that is *Le opere di Galileo Galilei* (Florence, 1929-39) I, pp. 251-419. On the dating of this work see I. E. Drabkin, "A Note on Galileo's *De Motu*," *Isis* LI (1960), pp. 271-77. See also Raffaele Giacomelli, *Galileo Galilei giovane e suo "de motu"* (Pisa, 1949). For an English translation of the *De motu* see Galileo Galilei, *On Motion and On Mechanics*, trans. I. E. Drabkin and S. Drake, (Madison, Wisc., 1960), pp. 1-131.

bodies moving in opposite directions meet. According to Galileo's chapter title, the Aristotelian position was still commonly held even at that time.¹⁷ Several arguments are given against this view, among them the one of Crescas and Pico concerning the large body descending on a smaller and lighter body. By that time this argument was apparently well known, for Galileo calls it common (*vulgatum*).¹⁸ He, of course, rejects the Aristotelian view as false, giving a number of reasons in addition to the one of Crescas and Pico. Besides Galileo, others toward the end of the century used the same argument against the position of Aristotle and Averroes. Pico's argument is reproduced word for word in Giambattista Bernardi's *Seminarium Totius Philosophiae* (1582–85).¹⁹ A similar argument is advanced by Francesco Piccolomini in his own treatise *De Motu*.²⁰

Pico did not make an enormous contribution to the overthrow of the Aristotelian theory of motion; but he, nevertheless, played a small role in the process. He certainly represents a most traditionally oriented opposition to Aristotle. But, in the sixteenth century, it was not always the harbingers of "free thought" and of novel ideas who made the greatest contributions to the eventual downfall of the medieval world view.

(3) Time

Gianfrancesco Pico's argument against Aristotle's definition of time is again largely drawn from Crescas' *Or Adonai*.²¹ As in the case of the discussion on motion, only Crescas' conclusions are repeated and the details by which they were worked out are not given.

Aristotle's motion of time is closely tied with that of motion. In fact, he argues that time cannot exist if there is no motion, for time cannot be perceived without motion (i.e. motion in its widest sense). Time is defined by the Stagirite as "the number of motion with respect

¹⁷ The chapter in question is entitled "In quo contra Aristotelem et communem sententiam ostenditur, in puncto reflexionis non dari quietem." This chapter is printed in *ed. cit.*, I, pp. 323–28.

¹⁸ "Quartum est vulgatum argumentum de magno lapide ex turri descendente, qui a calculo sursum vi impulso non firmabitur, ad hoc ut sinat calculum aliquantisper quiescere . . ." *Ibid.*, I, p. 326. Wolfson, *op. cit.*, p. 626 gives references to the same argument in Joannes Vensor (d. 1485), a Thomist commentator on Aristotle, and in Descartes.

¹⁹ *Ioannis Baptistae Bernardi . . . Seminarium Totius Philosophiae* (Venice, 1599) III, fol. 271^{vb}. This work and its author will be discussed more fully in the next chapter.

²⁰ In Francisci Piccolominei, *Librorum ad Scientiam de Natura attinentium pars. I–V* (Venice, 1600), fol. 219.

²¹ Proposition XV in Wolfson, *op. cit.*, pp. 283–91 and corresponding notes. Also see chapter 4 of the introduction (pp. 93–98).

to the before and after.”²² Pico, in opening his discussion of the problem, says first of all that motion is not necessary for time, for the latter can be measured by rest as well.²³ He cites Crescas’ definition of time as “the measure of continuity, motion, or quiet between two instants.” In this way, Crescas, and Pico after him, hoped to show that time is possible even if there is no possibility of motion. The two critics of Aristotle make measure rather than motion the primary genus of time. The reason given for this is that number pertains to discrete quantity, while measure is continuous.²⁴

Such an argument as it stands hardly shows a clear deviation from Aristotle. To distinguish between time as number and time as measure is to make a distinction that Aristotle did not make, for he uses the two interchangeably.²⁵ To reject Aristotle’s definition of time as number and to attempt to replace it simply by putting time in the genus of measure does nothing to discredit the Aristotelian definition. Furthermore, the criticism that the Aristotelian definition deals with discrete particles rather than with a continuous process shows an incomplete knowledge of the Aristotelian doctrine. The Greek master says clearly that when number is spoken of in relation to time it is continuous rather than discrete.²⁶ Aristotle may be charged with being inconsistent regarding this, since he says at one place that number is discrete and elsewhere says that it is continuous. Gianfrancesco Pico, however,

²² ὁ χρόνος ἀριθμὸς ἐστὶν κινήσεως κατὰ τὸ πρόσπερον καὶ ὕστερον *Physics* 220a24–25. The discussion of time is to be found in *Physics* IV, 10–14.

²³ See *Physics* 221a7–19. Aristotle also held that time is a measure of rest as well as motion, but only *per accidens* (*Physics* 221a7–8). In other words, something at rest can be measured in time, but only if it is capable of motion. In a universe where no motion is possible there can be no time. As is said a little further, those things which neither move nor are at rest, are not in time (*Physics* 221b20–1). Consequently eternal things which do not move (and cannot be said to be at rest either, since for Aristotle this implies a possibility of movement) are not in time.

²⁴ “Neque autem omnia recenseo, nam cunctam fere de naturalibus principiis Aristotelis doctrinam evertere tentarunt multi, inter quos etiam R. Hasdai Mosi Aegyptio minime assensus, qui propositiones peripateticas tanquam solido nixas fundamento receperat, inter quas illam: tempus esse numerum motus. Quiete namque mensurari tempus affirmat, etiam si nunquam motus inveniretur, magnam siquidem quietem vocari saepenumero est advertere, cum quicquam longo tempore conquiescit. Definit autem ipsum tempus ita (ut eius verbis agam) mensura continuitatis vel motus vel quietis, quae inter duo momenta; ut genus sit ipsa mensura viderique iure affirmat numerum genus esse primo non posse, cum sit discretæ quantitatis, mensura continuæ.” *Ex. Van.*, VI, 3; p. 765. This is very similar, interestingly enough, to the view of Aristotle’s pupil Strato, as reported by Sextus Empiricus (*Against the Physicists*, II, 177–80; *ed. cit.*, III, pp. 298–301). See S. Sambursky, *Physics of the Stoics* (New York, 1959), pp. 100–101 and Pierre Duhem, *Le système du monde* (Paris, 1913–59), I, pp. 245–46.

²⁵ See *Physics* 221b7.

²⁶ This is explained in *Physics* 219b5–9. The continuous (συνεχής) quality of time is definitely stated at 220a24–6. The problem arises for Crescas and Pico presumably because of the passage (4b20–5) in the *Categories* where number is spoken of as discrete.

criticizes him for something else. Consequently, we must say that our author's criticism is ill-founded. Crescas developed his argument further and arrived at a somewhat original concept of time.²⁷ However, Pico does not follow him that far. The end result of Gianfrancesco's disagreement with Aristotle on this point is that he used some of the arguments of Crescas to oppose him, seemingly without understanding fully either the theory of Aristotle or the alternative offered by Crescas.

(4) *Place* ²⁸

Our author next turns to a consideration of Aristotle's doctrine of place. Again Hasdai Crescas plays an important role in Pico's treatment of the subject, but ample material is also drawn from other critics of Aristotle, especially John Philoponus.

Aristotle defines place as the "limit of the surrounding body with respect to that which it surrounds."²⁹ This means that place must completely surround that of which it is place, it must be equal dimensionally to that which is surrounded, and it must be separable from the thing surrounded (i.e. it cannot move with it). In terms of the Aristotelian world and of the doctrine of "natural place,"³⁰ the earth has its fixed place in the center of the universe. The other elements form concentric spheres about the earth in order of their density – water, air, and fire. The sphere of fire is bounded by the sphere of the planets. The outer sphere is bounded by the ones contiguous to it. Therefore, each sphere and each of the elements has a fixed place which it occupies, its "natural place." The meaning of this concept of place can perhaps be more easily seen in the case of smaller bodies. A stone, for example, when moved, occupies first one place and then another, but the place occupied does not move with it. That is to say when it is moved it displaces air (or water) from the new place and the former place itself becomes occupied by air (or water).

²⁷ See particularly Wolfson, *op. cit.*, pp. 93–98 and the notes there referred to for a discussion of his contribution.

²⁸ For this section I cite once and for all the following sources: Max Jammer, *Concepts of Space* (Cambridge, Mass., 1954) pp. 1–91; Alexandre Koyré, *From the Closed World to the Infinite Universe* (Baltimore, 1957); Concetta Orsi, *Il problema dello spazio* (Naples, ca. 1958), pp. 1–51; Ernst Cassirer, *Das Erkenntnisproblem in der Philosophie und Wissenschaft der Neuere Zeit* 3rd ed., (Berlin, 1922–29), I, pp. 257–71; and Werner Gent, *Die Philosophie des Raumes und der Zeit*, 2nd unchanged ed., (Hildesheim, 1962).

²⁹ ἀνάγκη τὸν τόπον εἶναι . . . τὸ πέρας τοῦ περιέχοντος σώματος *Ibid.* 212a5–6. Aristotle's most detailed discussion of place is in *Physics*, IV, 1–4. See H. R. King, "Aristotle's Theory of Topos", *Classical Quarterly*, XLIV (1950), pp. 76–96 and Solmsen, *op. cit.*, pp. 118–35.

³⁰ We shall not discuss in detail the important notion of "natural place" and its implications. See A. Hayen, "La théorie du lieu naturel d'après Aristote," *Revue néoscholastique de philosophie*, XL (1937), pp. 5–43 and note 55 below.

Crescas discusses the Aristotelian doctrine in detail, devoting some attention to refuting it and to substituting for it a theory of his own.³¹ His objections to Aristotle's position are mostly based on the premise that, given the Aristotelian doctrine, it is impossible to maintain the existence of an infinite. Gianfrancesco Pico repeats certain of Crescas' arguments, but again without the detailed reasoning. Pico argues, first of all, that if the Aristotelian conception of place were correct, a problem would arise concerning the place of the individual parts of the various elements. For example, let us consider air. According to Aristotle air is "naturally" bounded by the sphere of fire on the outside and by earth and water on the inside. What, then, will be the place of a particular particle of air which lies in the center of the band of air? The entire band has its place, for it is bounded by other elements and thereby fulfills the Aristotelian requirements. An individual particle in the center, on the other hand, will be surrounded only by other air and will thereby not have a "natural" place, if the Aristotelian definition be strictly followed,³² for it will not be bounded by elements different from itself.

Exception is also taken to Aristotle's contention that when a body moves to its own place, it moves to that which is similar (*ὁμοιον*) to itself. That is to say that the succeeding elements in the series (earth, water, air, fire) are each similar to the ones next to themselves.³³ Our author rejects this for two reasons. First, the celestial bodies, which are not composed of the four elements, would have no similarity or affinity to their proper places, since the divine has no similarity to the natural. Secondly, the earth, which is composed of the lowest and heaviest element, must occupy the lowest place. But the lowest is a point and the name "place" cannot be given to that which is a point, but only to that which has a surface.³⁴

At this point the aid of the sixth century commentator, John Philo-

³¹ Wolfson, *op. cit.*, pp. 43-50, 153-57, 195-203, and corresponding notes.

³² "... quoniam proprius partium locus quae ad totius motum agitantur non est superficies circundans aequalis adeo, ut seorsum habeat cum partibus loci convenientiam. Nam si (causa exempli) suprema pars aeris conveniet imae continentis et circumvallantis ignis, media tamen pars ei non ita conveniet, nec in suo naturali reponetur loco, qui si assereretur parti ipsi suapte natura congruere, tamen diversus haberetur a loco totius et integri corporis collocati..." *Ex. Van.*, VI 4; pp. 766-67. Cf. Wolfson, *op. cit.*, pp. 196-97 for Crescas' argument.

³³ *De Coelo* 310b10-12.

³⁴ "... praeterea omnia quae collocantur corpora, suis congruere locis falsum esse aperiri et ex supremi coeli circumferentia et etiam ex terra, cui locus assignatur non superficies, sed punctus imus, cui loci nomen iure non congruit." *Ex. Van.*, VI, 4; p. 767. Cf. Wolfson, *op. cit.*, pp. 196-99.

ponus, is enlisted. Following the Grammarian, Pico argues that a body must occupy a place which has three dimensions, and the "lowest point" spoken of does not qualify. Philoponus had insisted on the three-dimensional quality of place and a point obviously cannot be said to have three dimensions.³⁵ According to the Grammarian's argument, place is "a certain interval, measurable in three directions, different from the bodies which occupy it, and incorporeal in its very nature. Place consists of the dimensions alone and is empty of every body. In fact, vacuum and place are essentially the same thing."³⁶ Such a definition shows a radical departure from that of Aristotle.

It will be noticed that the conception of place here offered by Philoponus approaches our own common-sense notion of space. The qualities of receptivity, incorporeality, three-dimensionality, and emptiness are much less determinate than the properties which Aristotle attributed to place, i.e. boundary, directionality, similitude to the thing occupying the place, and non-emptiness. The influence of Philoponus' view on sixteenth and seventeenth century discussion of the subject will become apparent as we proceed. Particularly significant is his tendency to identify place with vacuum. This will be discussed more fully below.

Philoponus admits the *theoretical* possibility of a vacuum, be it noted, although in fact one never exists. That is to say, there is always some body to fill space. The two (i.e. body and empty space), however, can be intellectually distinguished. This Aristotle would not admit, denying even the theoretical possibility of the void. Philoponus, on the other hand, says that space is never without body, but that it can be distinguished from body. This he explains as being analogous to the case of matter and form. Although matter is never found to exist without having some particular form, the two can, nevertheless, be intellectually distinguished.³⁷ Gianfrancesco Pico reproduces essentially the same argument, summing it up rather neatly by saying: "Thus place is space, vacant (*vacuum*) assuredly of any body, but still never existing as a vacuum alone of itself. It is like the case of matter, which is some-

³⁵ "Revertor ad Philoponum. Id absurdi constanter deducendum, ut corpus in loco quatenus corpus collocari nequeat, quoniam finis sive superficies aut extremum continentis tres non habet dimensiones, quae corpori quatenus est corpus ambiendo competant. Corpus enim quatenus corpus in loco est. Tria vero sunt intervalla corporis; quare pro loco triplex intervallum habere necesse est, ut corpus suscipiatur." *Ex. Van.*, VI, 4; p. 767. Cf. VI, 20; p. 807.

³⁶ *Ioannis Philoponi in Aristotelis Physicorum Libros* (Berlin, 1888), in *CAG* XVII, p. 567, lines 29-33. This work is hereafter referred to as Philoponus, *Physics* (Greek). On Philoponus' discussion of place see Duhem, *Système* . . . I, pp. 313-20.

³⁷ Philoponus, *Physics* (Greek), p. 569, lines 5-11.

thing other than form; but, nevertheless, never without form.”³⁸ Pico argues further that vacuum (or emptiness) must be three dimensional to be intelligible. He poses a most interesting theoretical situation. Let us suppose, he says, that place as Aristotle conceives it were changed in such a way that all of the elements which fill it would be taken away. What would then remain? To this very crucial question, he answers that there would remain merely “the space in which those things were previously contained.”³⁹

Aside from the criticisms of Aristotle's doctrine of natural place and his challenging of various minor details of the teaching, Pico is on the track of a wholly new conception of place and space. To say that “place is space, vacant (*vacuum*) . . . of any body” and to speak of space in terms of a “container” implies a wholly new outlook in Western natural philosophy. Pico's view marks a significant advance over the Aristotelian notion of place. It certainly is not yet a completely modern conception, but does bear a remarkable similarity to the idea of space which was so important in early modern physics. The fact that Pico acted as a transmitter of the ideas of both Philoponus and Crescas in the early years of the sixteenth century is not without importance. It was later in the sixteenth century that wholly new attitudes were expressed regarding space. The Aristotelian doctrines were ultimately rejected by all but the staunchest of the Peripatetic philosophers. A number of these newer ideas on space bear a clear relationship to the traditions transmitted by the younger Pico and, therefore, we shall briefly trace this development.

As Cassirer has pointed out, it was only gradually that Italian natural philosophy rejected the Aristotelian teaching of place.⁴⁰ Even a thinker like Girolamo Cardano (1501-76), who in so many ways heralded a new philosophical outlook by criticizing traditional attitudes, had a completely Aristotelian conception of place and space. Newer ideas were expressed by others like Bernardino Telesio (1509-88),

³⁸ *Spatium itaque locus est ex sese corpore quidem vacuum, sed numquam tamen re ipsa vacuum, sicuti materia aliud est quam forma, numquam tamen sine forma.* *Ex. Van.*, VI, 4; p. 768.

³⁹ “. . . et vacuum sine altitudine, latitudine, et profunditate nequeat intelligi; quod et ab ipso etiam Aristotele, vel aliquando est admissum; sed et admitti videtur necessario illis quibus mens non adempta est, cogitantibus si elementa recederent divino nutu, relinqui spatium, quo illa continebantur oportere.” *Ex. Van.*, VI, 4; p. 768. The same question was also raised by several thirteenth and fourteenth century thinkers. See Koryé, “Le vide et l'espace infini au XIV^e siècle,” pp. 33-84 and Duhem, *Système . . .*, VIII, pp. 48, 55-57. It is also repeated by Descartes. See *Principia philosophiae*, II, 18, in *Oeuvres*, ed. Adams and Tannery (Paris, 1897-1913), VIII, p. 50.

⁴⁰ Cassirer, *Das Erkenntnisproblem*, I, p. 257. No note is taken here, however, of Pico's view.

Giordano Bruno (1548–1600), and Tommaso Campanella (1568–1639). Certain of the notions of these men are very similar to the ideas on space and place which we have already seen expressed by the younger Pico.

Telesio, in his *De Rerum Natura* (composed 1544–53), draws some of his inspiration from the revived philosophies of Epicureanism and Stoicism, but still owes a good deal to other sources. When he talks of place, his debt to John Philoponus is quite evident.⁴¹ Telesio sees place as characterized primarily by its quality of receptivity – that is, as a container, as Pico had said. Moreover, he considers place to be something completely different from and separable from the things it contains.⁴²

This quality of space as a receptacle of bodies is also given clear expression by Giordano Bruno, who devotes a good deal of attention to refuting the Aristotelian doctrine in his Latin work against the Parisian natural philosophers.⁴³ One of Bruno's major influences on later philosophical and scientific thought was to frame this notion of empty space in terms of infinite extension. The characteristics of Bruno's space comprise: (1.) it is empty or a vacuum, (2.) it is infinite in extent, and (3.) it is a receptacle of corporeal objects.⁴⁴

The same idea is reiterated perhaps even more clearly in his Italian dialogue, *De l'infinito, universo e mondi*, when he says, speaking through Filoteo:

Perchè noi abbiamo un cielo, nel quale hanno gli lor spacci, regioni e distanze competenti gli mondi; e che si diffonde per tutto, penetra il tutto ed è continente, contiguo e continuo al tutto, e che non lascia vacuo alcuno;

⁴¹ Compare, for example, the way in which space is described by Telesio in Bernardini Telesii, *De Rerum Natura* ed. V. Spampanato (Modena, 1910–23) I, 25; vol. I, p. 87 with how it is described in the Latin translation of Philoponus in *Aristotelis, Physicorum Libri Quatuor, Cum Ioannis Grammatici . . . Commentariis*, trans. Giambattista Rasario (Venice, 1585), p. 191. This latter work is hereafter referred to as Philoponus, *Physics* (Latin).

⁴² "Itaque locus entium quorumvis receptor fieri queat, et inexistens entibus recedentibus expulsiue, nihil ipse recedat expellaturve, sed idem perpetuo remaneat et succedentia entia promptissime suscipiat omnia tantusque assidue ipse sit, quanta, quae in ipso locantur, sunt entia; perpetuo nimirum iis, quae in eo locata sunt, aequalis, at eorum nulli idem sit nec fiat unquam, sed penitus ab omnibus diversus sit. Spatium porro, quod corpore nullo prorsus repletum as propterea inane vacuumque sit . . ." Telesio, *op. cit.*, I, 25; vol. I, p. 87.

⁴³ In the work entitled *Camoeracensis Acrotismus adversus peripateticos Parisiis*, printed in Jordani Bruni Nolani, *Opera Latine Conscripta* (Naples, 1876) arts. 28–32; vol. I, part I, pp. 123–30. Also see arts. 33–34, pp. 130–35. For the similarities between Bruno's views and those of Crescas, see Wolfson, *op. cit.*, pp. 35–36 and *passim*. On Bruno's work against the Parisian physicists in general see Felice Tocco, *Le opere latine di Giordano Bruno* (Florence, 1889), pp. 102–18. This work of Bruno's was first published in 1588.

⁴⁴ Art. 27, p. 123 reads "Translatio corporum indicat magis locum esse spacium, quam quidcunque aliud. Est igitur receptaculum corporum magnitudinem habentium, ad nullam quatuor causarum reducibile, sed per se quintum causae genus referens." Also art. 29, p. 125, "Loca nimirum continere est, minime terminare." Also see arts. 33–34, pp. 130–35 where it is said that space is a vacuum. More will be said of this below.

eccetto se quello medesimo, come in sito e luogo in cui tutto si muove, e spacio in cui tutto discorre, ti piacesse chiamar vacuo, come molti chiamarono.⁴⁵

Much the same view is advanced a few years later in Tommaso Campanella's *Physiologia*,⁴⁶ where he clearly states that place has the capacity to receive bodies. In fact, the earth is situated in place. Moreover, place is incorporeal and has a somewhat metaphysical character, being called the "basis of existence".⁴⁷

The metaphysical conception of space, which we find in Campanella and Patrizi, had a certain influence on the late sixteenth and seventeenth century nature philosophers. It also has certain similarities to the notions of space later held by Newton and Kant. The more "physical" side of space which we have traced here – receptivity, emptiness, three-dimensional extent – forms, however, the basis of most early modern conceptions of space. The rejection of the Peripatetic doctrine of place (with the attendant concepts of "natural place," levity and gravity, natural and violent motion, and the *horror vacui*) is one of the keys that led to a revised world view in the course of the sixteenth and seventeenth centuries. The Copernican Revolution and the reassessment of ancient Atomism had no small part on the change that occurred. On the other hand, the tradition that was transmitted by Gianfrancesco Pico – that of Crescas and Philoponus – also had a role in providing an environment in which new views of space and place could flourish. Still in the seventeenth century, Gassendi could express a regard for Philoponus and his views, while concluding with the epitome of simplicity that "place is nothing other than empty space."⁴⁸

⁴⁵ Giordano Bruno, *Opere italiane* (Bari, 1925) I, p. 413. This dialogue was first published in 1584, during Bruno's stay in England.

⁴⁶ I use following edition: *Thomae Campanellae . . . philosophiae realis libri quatuor* (Paris 1637). The *Physiologia* was at least in part completed in 1592. For the complicated history of the text and the various printings see Luigi Firpo, *Bibliografia degli scritti di Tommaso Campanella* (Torino, 1940), pp. 73–95.

⁴⁷ "Hoc est locus, qui basis existentiae, in quo pulchrum Opificium, hoc est Mundus, sedet; quem si non esse imaginabitur, fateri oportet spatium vacuum illius remanere. Locus ergo est substantia prima aut sedes aut capacitas immobilis, et incorporea apta ad receptandum omne corpus." Campanella, *ed. cit.*, cap. I, art. 2, p. 3. This "metaphysical" concept of space is also developed by Francesco Patrizi. See for example the chapter *De spacio physico* in the *Pancosmia* in *Francisci Patritii . . . Nova de Universis Philosophia* (Venice, 1593), fols 61–8. An English translation of this is to be found in Benjamin Brickman (translator), "On Physical Space [by] Francesco Patrizi," *JHI* IV (1943), pp. 224–45. See Francesco Fiorentino, *Bernardino Telesio ossia studi su l'idea della natura nel risorgimento italiano* (Florence, 1872) I, pp. 393–414.

⁴⁸ "Locum nihil esse aliud, quam spatium hactenus descriptum [i.e. the vacuum or empty space]." This is the chapter title to his brief discussion of *locus* (three and a half pages), after a much longer one on *vacuum* (thirty-two pages). Quoted from Petri Gassendi, *Opera Omnia*

Such a view differs little from Pico's opinion that "place is space, vacant . . . of any body." The major difference between the conceptions of the two is that Pico had little realization of the implications of his view and, more basically, did not particularly care what the implications were so long as the Aristotelian view on the matter was discredited. Gassendi, and not only Gassendi but also many others of the more "scientific" minded thinkers of the sixteenth and seventeenth centuries, began to see the implications of such a view and directed his own studies and research accordingly. As a consequence, in the course of the century or so after the publication of the *Examen Vanitatis*, the common conceptions of place, space, and vacuum underwent a far-reaching change. Place became more or less absorbed into the single notion of space; and the Aristotelian notion of "natural place," if not completely abandoned,⁴⁹ was certainly on the way out, and nearly all of the more forward looking thinkers no longer accepted it.

Vacuum is another story. As we have said, unlike space or place, it proved to be susceptible to empirical demonstration and consequently proved to be a key issue in the early modern struggle between natural philosophy as a philosophical discipline and physics as an empirical, scientific discipline. Let us now turn to a discussion of what Gianfrancesco Pico has to say about vacuum and how the notion was developed in the sixteenth and early seventeenth centuries.

(5) *Vacuum*⁵⁰

The philosophical discussion of the vacuum has a long and detailed history.⁵¹ It was one of the most discussed physical concepts from the

(Lyon, 1658) III, p. 216a. (All other references to the works of Gassendi will be to this edition unless otherwise stated.) This is from the *Syntagma* pars II, sectio I, lib. 2, cap. 6. Philoponus is mentioned several times in this discussion (p. 217a, two times) besides being spoken of in the discussion of vacuum, of which see below note 103.

⁴⁹ Although Zabarella does not speak about *locus* at any great length, what he has to say on the matter clearly presupposes a close adherence to the Aristotelian formula. See Iacobi Zabarella, *De Rebus Naturalibus Libri XXX* (Venice, 1590), p. 207. The Aristotelian view is also defended in the Coimbra Commentaries, although certain objections against it are listed and then refuted. See *Commentariorum Conimbricensis . . . In Octo Libros Physicorum Aristotelis Stagiritae* (Cologne, 1625), II, cols. 29–34. Gianfrancesco Pico is mentioned as a source for views opposed to Aristotle's on the subject of place (col. 30). More will be said of Pico's relation to these commentaries in the next chapter. Zarabella's work carries a dedicatory letter from 1589. The Coimbra Commentaries were first printed between 1592 and 1606, but were probably in classroom use a number of years before. For Galileo's rejection of the Aristotelian position see our discussion below pp. 154–56.

⁵⁰ In this section I shall use the English terms "vacuum," "void" and "empty space" interchangeably. The Latin equivalents (*vacuum* and *inane*) are sometimes given a terminological distinction by a particular author, but not consistently. The idea is almost always expressed in Greek by the single term *κενόν*.

⁵¹ Still basic for the study of the history of the notion of vacuum is Kurd Lasswitz, *Ge-*

time of the pre-Socratics until the demonstration of the vacuum as a reality in the seventeenth century. In early Greek philosophy the notion was defended principally by Leucippus (fifth century B.C.), Democritus (fifth century B.C.), and their followers who held a generally materialistic view of the universe. According to their doctrine there exist only atoms (*ἄτομα*) and the void (*κενόν*), infinitely extended.⁵² The same doctrine was later accepted by Epicurus (342/1–270 B.C.) and, among the Latins, by the poet Lucretius (96–55 B.C.). The existence of a void was also defended by the Pythagoreans, who held a much different view of the universe than did the Atomists, but still agreed with them on the existence of an empty space. The Pythagoreans held that such a void exists only beyond the last of the celestial spheres, also maintaining that it is infinite in extent and that from it the earth draws its breath.⁵³

Aristotle was probably the most prominent Greek critic of the notion of the vacuum or void. We shall not here give a complete analysis of his discussion of the question, but we shall merely consider the aspects of it which are pertinent to Pico's treatment of the issue.⁵⁴ These are principally the ones derived from Aristotle's doctrine of motion. For Aristotle there can be no motion in a vacuum. There are only two basic categories of local motion, natural motion (*κατὰ φύσιν*) and forced or violent motion (*βίβη*). The latter is not possible if there is no natural motion, since something non-natural presupposes something natural. Moreover, there can be no natural motion in a vacuum, he continues, for in that case it would not differ from the infinite (i.e. there would be no directional differentiation to determine what course "natural motion" would take). If this were true, there would be no absolute directions (i.e. there would be no up or down).⁵⁵ As a result, there would be

schichte der Atomistik vom Mittelalter bis Newton (Hamburg and Leipzig, 1890), 2 vols. and Duhem, *Système . . .*, VIII, pp. 1–168. For some brief comments on the significance of the vacuum discussions during the Renaissance see Charles B. Schmitt, "Changing Conceptions of Vacuum: 1500–1650," to appear in *Proceedings of the XI International Congress of the History of Sciences* (Warsaw-Cracow, August 24–31, 1965) and "Experimental Evidence for and against a Void: the Sixteenth Century Arguments", forthcoming in *Isis*.

⁵² The basic fragments dealing with the doctrine of Leucippus and Democritus are printed with an English translation and commentary in G. S. Kirk and J. E. Raven, *The Presocratic Philosophers* (Cambridge, 1957), pp. 406–409. See also Cyril Bailey, *The Greek Atomists and Epicurus* (London, 1928).

⁵³ Aristotle, *Physics*, 213b18–22. See also Kirk and Raven, *op. cit.*, pp. 252–53.

⁵⁴ Aristotle, *Physics*, IV, 6–9. On Aristotle's view see Duhem, *Système . . .*, I, pp. 189–97 and Solmsen, *op. cit.*, pp. 135–43.

⁵⁵ It will be recalled that according to Aristotelian physics motion is defined in terms of such absolute directions. For example, light bodies (e.g. fire) would "naturally" move in the "up" direction, whereas heavy bodies (e.g. earth) would "naturally" move in the "down" direction. Correspondingly, violent or forced motion is a type of motion imposed on an ob-

no natural motion, since the tendency for the various elements to move in their "natural" directions would be lacking. But, according to Aristotle's way of thinking, such a thing would be quite impossible and, consequently, he concludes that the existence of a vacuum is untenable.

A further, and historically more important, argument based on motion is also given. Aristotle argues that the velocity at which an object travels (when following "natural motion") is dependent upon two factors: (1.) its heaviness or lightness and (2.) the resistance which it encounters when it moves. Consequently, if there were a vacuum, no resistance whatever would be encountered and an object would move instantaneously through a finite distance.⁵⁶ Such an argument can be expressed perhaps more intelligibly in algebraic terms. If " V " represents the velocity of the object travelling through a medium, " P " the power of the motive force, and " R " the resistance of the medium, the Aristotelian formulation can be roughly expressed as follows:

$$V \propto \frac{P}{R}$$

The velocity will be, therefore, a variable directly proportional to the motive force and inversely proportional to the resistance of the medium. From such a formulation, it can readily be seen that, as the resisting medium becomes less, the velocity will increase to the point that, if a perfect void could be attained, all objects would move at an infinite velocity. Aristotle concludes – inadvertently formulating one of the basic principles of early modern physics – that in a vacuum all objects would travel at the same rate of speed. Incorrectly, however, he holds that this velocity would be infinite.

In opposition to the well known Aristotelian position, Pico argues that the existence of a vacuum is possible. The material with which he attempts to refute the Aristotelian position is again drawn principally from the writings of Philoponus and Crescas. After presenting Aristotle's arguments against the possibility of the existence of a void, our author carefully gives Philoponus' counter arguments.⁵⁷ It is true as Aristotle said, Philoponus argued, that the speed at which an object

ject that would make it move in a way different than it would through its "natural" tendency, e.g. if a heavy projectile were shot upward by means of a sling. See particularly *De Coelo* I, 2; *Phys.* IV, 4-5; Duhem, *Système* . . . I, pp. 205-10.

⁵⁶ See our discussion below (pp. 150-51) on how Averroes defends Aristotle on this point.

⁵⁷ For Philoponus' arguments see Philoponus, *Physics* (Greek) pp. 675-95. Latin translation in Philoponus, *Physics* (Latin) pp. 225-33. Also see Duhem, *Système* I, pp. 351-71. There is a partial English translation of Philoponus' argument in M. R. Cohen and I. E. Drabkin (eds.), *A Source Book in Greek Science* (New York, 1948), pp. 217-22.

moves is dependent upon two factors: its own heaviness and the resistance of the medium through which it travels. It is not true, however, that an object will move at an infinite velocity if it encounters no resistance, for the lightness or heaviness (i.e. the motive power) of the moving object will still be a determining factor, even though there be no opposition to movement by the medium. The resistance encountered follows from the heaviness or lightness of the body and from its configuration, and it does not itself determine the velocity of the moving body without reference to the nature of the body itself.⁵⁸

This theory can be restated in terms of a mathematical expression as follows:

$$V \propto (P - R) \quad \text{Perhaps more precisely, } V \propto (P/I + R)$$

The velocity at which the object moves will be proportional to the motive power *less* the effect of the resisting medium. A significant difference emerges between this and the Aristotelian formulation. In the Aristotelian system, as the resistance of the medium approaches zero, the velocity of the object approaches infinity. In Philoponus' formulation, as the resistance approaches zero, the velocity becomes solely a function of the motive power, which, in turn, is a function of the shape and heaviness of the moving body.

Pico gives a further argument against Aristotle's contention that all bodies would move at the same speed in a vacuum. If such a thing were true, he argues, then the spheres which are above the moon would all move at the same velocity, for they are above the realm of the four elements and move freely throughout space, encountering no resistance at all.⁵⁹

It is worth noting, however, that in his discussion of the question

⁵⁸ Pico presents Philoponus' argument as follows: "Cum nulla sit ex parte rei motae differentia, quando per vacuum inaequalis ponderis corpora moveri dixerunt aequaliter. Quod si verum est, verum esse non potest dogma Aristotelis, falsum certe erit et sibi ipsi prorsus adversum. Scribit enim duas esse causas inaequalis motus medii videlicet mobilisque rei diversitas mediumque ipsum per quod mobile fertur, causam esse quae impedit et contra nititur, utpote divisione fracturaque indignum, quocirca agens et praecipua causa rei mobili fertur accepta adeo, ut ipsa maneat etiam si subtrahatur impediens. Magis itaque et minus gravia corpora vergunt ad imum suapte natura et gravitatis proportionem inclinabunt magis et minus, unde motus prodit inaequalitas, etiam si nihil resistat, nihil impediatur, quod dividi penetrarique oporteat. Sequitur enim divisio non praecedat, sequitur dico tamquam effectus, delapsi corporis gravitatem atque figuram." *Ex. Van.*, VI, 5; p. 770.

⁵⁹ "Nec contentus rationes Aristotelis dissolvere, argumentatur ipse fieri posse motum per vacuum, hoc est per nullum corpus, immo et fieri semper nulla per corpora coelestes motus, diversitate multa celeritatis et tarditatis. Manifestum enim sphaeras mundi superiores globosque syderum semper agitari, alios quidem celerius aliis, nec per ullum meare corpus; neque enim per elementa subitus collocata, neque per se ipsos incedunt, finis enim aut dividi nequit coeleste corpus superiorque sphaera, illa omnium extrema, extrinsecus non tangitur." *Ex. Van.*, VI, 5; p. 770.

Philoponus adds that the speed with which they move is dependent not on the medium through which they are travelling, but rather on factors attributable to the nature of the bodies themselves.⁶⁰ Strangely enough, Pico does not consider it important to mention the Grammarian's seemingly valid reasons, but is content to supply a somewhat less forceful argument of his own. He merely says that in celestial motion all things are possible – apparently because of the divine nature of the superior world of the spheres – a fact which Aristotle had not realized.⁶¹ Further discussion of the question is also drawn from Philoponus. If circular motion of the incorruptible spheres is possible in a vacuum, Pico asks, what is to prevent rectilinear motion of corruptible objects from taking place in a vacuum in like manner?⁶²

Pico is perhaps the first to discuss these arguments of Philoponus in Western Europe.⁶³ This is not to say that an almost identical argument was not known and debated throughout the Middle Ages, but only to say that it was not generally identified with the name of John Philoponus. A similar argument against Aristotle's rejection of the possibility of a void was voiced already in the Arabic world by Avempace (d. 1139), was considered but rejected by Averroes, and became a much debated issue in Europe during the later Middle Ages.⁶⁴ Whether or not Avempace's own formulation had its ultimate source in Philoponus is unknown, no evidence having been found to answer the question in one way or the other. What is clear however is that in the "pre-Galilean" period of the sixteenth century, the two criticisms were of separate traditions and were both well known.⁶⁵

⁶⁰ Philoponus, *Physics* (Greek), p. 690, lines 8–16. The movement of the spheres is dependent on the force of each of the different moving bodies and on their type of motion.

⁶¹ "Quare in coelestibus motibus omnia fieri comprehendimus, quae fieri non posse censet Aristoteles." *Ex. Van.*, VI, 5; p. 770.

⁶² *Ibid.*, VI, 5; p. 770. See also Koyré, "Le vide et l'espace infini au XIV^e siècle."

⁶³ See the article of Grabmann cited in note 2.

⁶⁴ See especially Ernest Moody, "Galileo and Avempace," *JHI* XII (1951), pp. 163–93, 375–422, who discusses the development of this from Averroes to Galileo. Also important for the discussion in the West during the thirteenth and fourteenth centuries is Anneliese Maier, *An der Grenze von Scholastik und Naturwissenschaft*, 2nd ed., (Rome, 1952), pp. 219–54; *idem*, *Zwischen Philosophie und Mechanik* (Rome, 1958), pp. 239–85; and Marshall Clagett, *The Science of Mechanics in the Middle Ages* (Madison, Wisc., 1959), pp. 421–44. For the basic text through which Avempace's opinion was transmitted to the West see Averroes, *Comm. in Libros. Phys.*, in *ed. cit.*, IV, fols. 158^r–162^r, esp. 160^v–^r. It is worth noting, however, that Averroes mentions that Philoponus holds the existence of a vacuum to be possible, although he does not furnish any details on the Grammarian's arguments (lib. IV, text 43, fol. 141^{rb}).

⁶⁵ Averroes' commentaries were too well known in the sixteenth century to require comment. The extent to which his comments – and in this case what he says of Avempace's position – were in the consciousness of the sixteenth century natural philosophers is evidenced by the very long discussion of this passage (text 71 of book IV) which we find in a work like Nifo's commentary on the *Physics* (*ed. cit.*, pp. 319–25). Averroes (*ed. cit.*, IV, fol. 161^{vb})

Precisely why Pico chose to express his opinion by citing Philoponus as an authority rather than Avempace is not a question that is easy to answer. He certainly must have known Avempace's opinion on the matter, for Book IV of Averroes' commentary on the *Physics* is even mentioned in the same chapter in which he presents Philoponus' position.⁶⁶ Regardless of why he did so, he seems to have been one of the few philosophers of the century who attributed the view to the Grammarian. As Moody says, even in the sixteenth century when it was fashionable to attribute opinions to ancient, rather than to medieval or contemporary authorities, the view which we have just discussed went under the name of "Avempace's opinion."⁶⁷

A possible explanation why Pico chose to attribute the theory to Philoponus rather than Avempace may lie in the fact that Philoponus treated the question in a good deal more detail and gave several other accompanying arguments (besides the basic one of $V \propto P/R$ vs. $V \propto (P - R)$). Avempace's argument, on the other hand, as it has come down to us by way of Averroes is known only in summary form, although a huge number of detailed commentaries on it were available by the beginning of the sixteenth century. A further explanation, and perhaps a more likely one, might lie in the fact that Gianfrancesco seemed to take a good deal of delight in citing esoteric sources such as Sextus Empiricus, Hasdai Crescas, Theodorus Metochites, Joseph Rhacendites, etc., who were by no means well known in the early sixteenth century. Neither was Philoponus well known as a defender of "Avempace's opinion" and it is possible that Pico felt that his argument gained a certain amount of prestige by connecting a startling and different name to it.

Pico also gives other reasons in support of his contention that the existence of a vacuum is possible. These are derived from Crescas⁶⁸ again, although probably the majority of them were already known in the West by Pico's time. What Crescas had to say on the matter is interesting since he more or less summed up the discussions of the vacuum

specifically says that Avempace was the first to advance this criticism, indicating that he was not aware of Philoponus' critique.

Although Philoponus' arguments do not seem to be well known at the time when Pico published his work (1520), his commentary on the *Physics* was published not long afterward, at Venice in 1535. Latin translations appeared rapidly and were often reprinted during the century, indicating a certain amount of popularity. Printings of Latin editions appeared at Venice in 1539, 1546, 1550, 1554, 1558, 1569, and 1581.

⁶⁶ *Ex. Van.*, VI, 5; p. 769.

⁶⁷ Moody, *op. cit.*, p. 414. But see our note 87 below.

⁶⁸ Proposition I, Part II, "The First Speculation" in Wolfson, *op. cit.*, pp. 178-91. Also see the accompanying notes (pp. 391-424) and the Introduction (pp. 54-62).

as it developed in the Arabic and Hebrew traditions. These arguments also complement those of Philoponus and add something to Pico's case against Aristotle. Our author begins by arguing with Crescas that it is possible, even if there is a vacuum, for the elements to have their proper places. Even though the elements (i.e. air, earth, fire, and water) might be intermixed with a void (as was the Atomists' view), they can still have *termini a quo* and *ad quem* at the center and the circumference of the world.⁶⁹ Regardless of the fact that there be a vacuum, the *terminus a quo* for fire would be at the center and its *terminus ad quem* would be the periphery or the "sphere of fire."

This argument has a certain similarity to one of those used by Philoponus but seems to be directed primarily against Aristotle's contention that in a vacuum there would be no differentiation of direction. According to Crescas, although there would be empty space in the world, this would not prevent there also being a center and circumference which would act as *termini* for the natural motion of the elements. In short, it does not follow that, if one argues that there is a vacuum, he must also hold that there is no differentiation of direction.

After bypassing Crescas' discussion of what we have called "Avempace's opinion," Gianfrancesco turns to a problem closely related to it. He reproduces Crescas' counter argument against Averroes' rejection of Avempace's position.⁷⁰ Averroes had rejected Avempace's argument, because he felt that the latter had given an absolute status to the "natures" of moving bodies instead of always treating them in relation to their medium. According to Averroes, one cannot speak of the heavy or light quality of a body *qua* body, but can only discuss it in relation to a particular medium.

Averroes had used the following argument to support his position. The keenness of an iron blade is greater than that of a bronze blade, but one cannot think of an "absolute keenness" without thinking of it inhering in a particular material. In the same way qualities such as "heaviness," "lightness," and "motion" can be thought of only in relation to the medium in which they occur. In Averroes' eyes when

⁶⁹ "Nunc ex Graecis expositoribus digressi, parumper videamus quid Hebraeus Rabi Hasdai de eodem vacuo senserit. Arbitratur nihil iuvare Aristotelem eam quae dicitur loci ad collocatum corpus convenientiam, cum fieri queat ut elementa etiamsi sint immixta vacuo eam possideant et diversos etiam habeant et suos terminos, quibus factum est nomen a quo et ad quem, ex propinquitate videlicet atque distantia ad circumferentiam et centrum." *Ex. Van.*, VI, 6; p. 771. This argument was also given by Philoponus. See Duhem, *Système* ..., I, pp. 352-53.

⁷⁰ This is not precisely true, since Crescas argues against Averroes' rejection as given by Gersonides. See Wolfson, *op. cit.*, pp. 403f., note 13 and p. 409, note 17,

Avempace speaks of such terms in the absence of a medium, it does not make sense.⁷¹

Crescas and Pico reply to this charge by saying that heaviness and lightness in themselves are sufficient to produce a motive power and there is no necessity for a medium. All bodies can move by virtue of their quality of heaviness or lightness and their relative motion is determined merely by their relative heaviness.⁷²

Another argument against the possibility of a vacuum is then considered. Some have held that if there were a vacuum, the vacuum itself would be a body since it is three-dimensional. They further argue that to say that a body is in a vacuum is to say that one body is in another, which is obviously false, for two bodies cannot occupy the same place at the same time.⁷³ In opposition to this, Pico argues that the impenetrability of matter is not based on the fact that three-dimensionality cannot interpenetrate, but rather on the fact that only when these dimensionalities are conjoined to matter they cannot interpenetrate.⁷⁴

⁷¹ See Averroes, *ed. cit.*, IV, fols. 160^v-162^r; Wolfson, *op. cit.*, pp. 403-408, note 13a; pp. 409-10, note 19; Moody, *op. cit.*, p. 189. What Averroes is arguing here might be made clearer by the adoption of a physical example. In the case of Ohm's Law, the current flow through a circuit is the ratio of the voltage drop to the resistance of the circuit. Thus, algebraically it might be expressed as $I = E/R$. As the resistance is reduced, the current flow increases, if the voltage is held constant. So, when the circuit is made up of different media or materials (i.e. iron, copper, silver, etc.) the resistance varies. Certain high-conductivity metals held at extremely low temperatures offer very low resistances, but there is no such thing as an "ideal conductor" which would have no resistance. For the law to be valid there must be a complete electrical circuit and whenever there is a complete circuit, there is necessarily a resistance to current flow. Thus, resistance is inherent in the nature of the system and one cannot speak of a circuit without resistance.

Similarly conceived is the Aristotelian theory of local motion, which we have expressed algebraically as $V \propto P/R$. The expression (P/R) , though theoretically analyzable ($P \propto 1/R$), in fact can never be separated if motion is to take place. Motion must be *through* a medium just as electrical current must be *through* a circuit.

⁷² Wolfson, *op. cit.*, pp. 184-85; *Ex. Van.*, VI, 6; p. 771 where Pico puts it as follows, "... et praeterea nihil efficere eas quae sunt excogitatae contra vacuum rationes et fundatae super motu recto, quando intermedium nullum sit necessarium; et dici queat gravitatem et levitatem naturaliter corporibus inesse mobilibus, nec ea mediis indigere. Dici etiam possit omnibus corporibus inesse gravitatem eaque vocari levia, quae videlicet gravia sint minus, eaque ipsa moveri sursum ex eorum, quae magis gravia sunt, impetu et violentia." Following the same analogy as in the previous footnote, we might say that they view the situation as being similar to that of our modern conception of the passage of light through a medium. According to this theory, light travels at a given velocity in a vacuum and when travelling through other media (e.g. air, water, or glass) this velocity is reduced by the optical characteristics of the medium. Therefore light has *per se* a particular velocity which will be at its maximum when it travels through no medium (i.e. a vacuum) and will be somewhat reduced when travelling through other types of physical media.

⁷³ Aristotle hints at such an argument against the vacuum (*Phys.* 216a26-b2), but it is made much clearer in the later commentaries, e.g. Averroes, *ed. cit.*, IV, fols. 165^v-66^v. Further opinions of the commentators are to be found in Wolfson, *op. cit.*, pp. 415-16, note 28.

⁷⁴ "Parvi facit etiam non penetratorum corporum ob dimensiones rationem, cum dimensiones materiae iunctas id efficere posse dicendum sit, non seiunctas et ab omni prorsus materia separatas." *Ex. Van.*, VI, 6; p. 771; Cf. Wolfson, *op. cit.*, pp. 184-87.

This amounts to saying that it is true that three dimensional objects cannot interpenetrate *only* when they are material objects. A three-dimensionality, such as a vacuum, can contain another three-dimensionality, since the former has no material accidents, but rather is "pure" three-dimensional space, having no quality other than tri-dimensional extension. This problem is somewhat analogous to that of determining the place of a spiritual substance. A soul can exist *in* man or an infinite number of angels *on* the head of a pin simply because they do not have material qualities and therefore are not governed by the same laws regarding the occupation of space as are material entities.

The same thing was already hinted at before by Philoponus in his discussion of place, where it was noted by Gianfrancesco.⁷⁵ Philoponus' notion of place as pure three-dimensionality in which a body can *be* does not differ markedly from the conception of vacuum as three-dimensional extension devoid of matter. In fact these qualities of three-dimensionality (τριχῆ διαστατόν), incorporeality (ἄσώματον), and privation of body (κενὰ σώματος) led Philoponus to say that place and vacuum are essentially the same thing.

Pico introduces a further sub-argument which attacks the position that "those who hold that the vacuum exists say that it is the cause of motion." This apparently revolves around the Aristotelian rejection of the Democritean theory of motion in a vacuum. Democritus argued that a vacuum is necessary for motion of any sort, for otherwise there would be the interpenetration of bodies.⁷⁶ In opposition to this, Aristotle said that vacuum cannot be the cause of motion. This opinion was expanded and elaborated on by his followers and commentators.⁷⁷ Crescas and Pico argue against the Aristotelian position by saying that vacuum is meant to be the cause of motion only in an accidental way. It is not an efficient or final cause of motion, but we might call it a necessary condition (or a necessary reason, as opposed to a sufficient reason) for motion. That is, vacuum is necessary if there be motion and still no interpenetration of bodies.⁷⁸

⁷⁵ See above pp. 140-41 and notes 35-38.

⁷⁶ Given in Aristotle's *Physics* 213b2-12. See also 214a24-5 where the term αἴτιον . . . κινήσεως is used. The Stoics, however, argued that πνεῦμα penetrated all bodies and filled the universe. See Duhem, *Système . . .*, I, pp. 301-308; S. Sambursky, *The Physical World of the Greeks* (London, 1956), pp. 134-37; *idem*, *Physics of the Stoics*, pp. 1-48 and Emile Bréhier, *La théorie des incorporels dans l'ancien stoïcisme*, 3rd ed. (Paris, 1962), pp. 37-53.

⁷⁷ See for example Averroes' commentary on text 64 of Book IV (*ed. cit.* IV, fols. 153^vb-154^{ra}) or Nifo's commentary on the same passage (*ed. cit.*, pp. 314b-315a).

⁷⁸ "Negat et eos qui vacuum astruxere, id ipsum causam motus asseruisse, praeterquam ex accidenti, ne videlicet fieret corporum penetratio." *Ex. Van.*, VI, 6; p. 771. This is somewhat truncated, as is often the case in Pico's reproduction of Crescas' arguments. For Crescas' fuller treatment see Wolfson, *op. cit.*, pp. 180-83. Aristotle is still able to explain

Pico also reproduces the Pythagorean argument for the possibility of a vacuum beyond the last sphere of the fixed stars. In all, he gives three arguments for the existence of a vacuum outside the world. First, even if the argument that in a vacuum there is no *terminus a quo* and *terminus ad quem* were valid,⁷⁹ this would still not prevent there being a vacuum outside the world, where there are no *termini*, since the bodies would be moving in circular motion. This would be especially true, if we accept the Aristotelian conception of the universe, which has no beginning, but is eternal.⁸⁰ Analogously, Pico says that even if the arguments against the necessity of a medium for motion were not valid for the material world, they would still be valid for the possibility of a vacuum outside the world.⁸¹

Finally, Pico gives a third argument to demonstrate the necessity of a vacuum outside of the world.⁸² If the world is not infinite in extent, as Aristotle himself held,⁸³ and there is no body outside the confines of the world, there must be a vacuum there.⁸⁴ This certainly seems like a convincing argument, but it is one that could not be accepted by the Aristotelians. Both infinity and vacuum were refuted by Aristotle along somewhat theoretical lines, but these refutations assumed such a key position in the later tradition that the discussions of them sometimes went far beyond the concepts as envisioned by Aristotle himself. For example, the Jewish thinker, Gersonides (1288–1344), had already

motion without the necessity of a vacuum in terms of the replacement of one body with another and by means of condensation and rarefaction. These things he discusses when he undertakes a specific refutation of Democritus' view (see *Phys.* 214a26–b12).

⁷⁹ For the discussion of this argument against the vacuum see above p. 150.

⁸⁰ "... atque ut caetera obstarent vacuo, nihil tamen officere, quin orbiculare corpus in eo moveatur, cum in motu circulari, nec terminus a quo, nec terminus ad quem motus tendat, inveniatur; et secundum Aristotelem maxime qui motum nunquam voluit incepisse..." *Ex. Van.*, VI, 6; p. 771. Cf. Wolfson, *op. cit.*, pp. 182–83.

⁸¹ "... nec impediri ex intermedio quin vacuum extra mundum reperiri queat." *Ex. Van.*, VI, 6; p. 771. Cf. Wolfson, *op. cit.*, pp. 184–85. For the argument that a medium is not necessary for motion even in the world see our discussion above pp. 146–51. Pico does not reproduce Crescas' reasons for this view. The Jew argues that the circular motion of spherical bodies is a movement that does not involve the change of place and is therefore possible even if there is no medium.

⁸² It will be noted that here we have said "necessity" instead of "possibility," as we did in regarding the two prior arguments. That is because this third one seems to be a more conclusive argument of necessity, whereas the other two merely argue that it is not impossible for a vacuum to exist outside the world.

⁸³ Aristotle argues at length against the possibility of infinity (*Phys.*, III, 4–8).

⁸⁴ "... imo accersiri vacuum ab eis vel nolentibus, quibus asseritur non inveniri corpus infinitum. Nam si nullum est extra mundum corpus, nec plenum ibi esse vincitur, vacuum potius et seiuncta dimensio." *Ex. Van.*, VI, 6; p. 771. Cf. Wolfson, *op. cit.*, pp. 188–89. This question was much discussed in the thirteenth and fourteenth centuries. See Duhem, *Système* ..., VIII, pp. 35–60, *passim*, and Koyré, "Le vide ..." pp. 70–71, 75. The Stoics also held that a vacuum exists outside the world (Duhem, *Système* ..., I, pp. 308–13 and Sambursky, *Physics of the Stoics*, pp. 110–15, 128–29, 143–44).

answered this argument by saying that outside the world there is only privation or non-being.⁸⁵ Privation or non-being has a wholly negative significance; that is, one cannot even form a mental concept of this "non-being," which would be beyond the last sphere. On the other hand, vacuum as envisaged by the Epicureans, Pythagoreans, Crescas and Pico was not privative, but merely indeterminate. It has the single quality of dimension and is hence capable of receiving those accidents of which pure dimension is susceptible.

To establish more clearly here the distinction we are trying to make between the vacuum of Pythagoras, Epicurus, etc. from the privation or non-being spoken of by the Aristotelian school, we shall resort to a somewhat facetious example. Assuming that a space rocket were operating in the Ptolemaic-Aristotelian universe, let us see how this would be interpreted by the two opposing conceptions. For the upholders of the vacuum no problem would arise if the rocket went beyond the "world," for it would move freely in a boundless vacuum that is capable of receiving a moving object. On the other hand, such a thing could not take place in the Aristotelian world, for other than the impossibility of it passing through the spheres of the celestial bodies, there is no possibility to interpret what would happen when it passed the last sphere of the fixed stars.

With these arguments for the existence of a void beyond the world, Pico ends his discussion of the vacuum. He has drawn his material for this exposition from two philosophers who were little known to Europeans of the early sixteenth century. In combining the material from these two sources, our author more or less summarized the available arguments showing that a vacuum is not an impossibility.

Let us return again to the problem of motion in a vacuum. Philoponus, Crescas, and Pico, besides Avempace and many twelfth and thirteenth century writers, both Eastern and Western, opposed Aristotle on this. Through the Greek, Hebrew, Arabic, and Christian philosophical traditions much effort had been expended on this question. It still retained currency throughout the sixteenth century. Finally, about 1590 Galileo began speaking of motion through a vacuum as a reality. The Philoponus-Avempace hypothesis is discussed in his *De Motu* in mathematical terms.⁸⁶ He clearly opposes Aristotle's contention that in a vacuum all bodies would move at the same rate of speed (i.e. infinite

⁸⁵ Wolfson, *op. cit.*, pp. 419-21, note 35, where Gersonides' and others' objections to the Pythagorean position are given.

⁸⁶ In the treatise *De Motu* in *ed. cit.*, I, pp. 245-419; esp. pp. 276-89, 294-96. See Moody, *op. cit.*, pp. 166-83.

velocity) and supports the Philoponus-Avempace position that the "natural" velocity of the elements through a vacuum would be finite and would depend only on the relative densities of the elements in question. He further replaces the Aristotelian duality of levity and gravity by the single force of gravity. So, for Galileo, even the lightest of the elements (fire) would move downward in a vacuum, since it is heavier than nothing, although it is lighter than air and the other elements.

The errors in such a position are now evident, but, at the same time, there are several significant advancements over the Aristotelian theory. First, an important step has been made by recognizing the single determining factor of gravity in place of the Aristotelian duality. Secondly, to follow Philoponus and Avempace in holding that motion can occur in a vacuum at a finite velocity is an important realization, even if Galileo had not yet correctly formulated the gravitational theory that the velocity of all free-falling objects in a vacuum is equal.⁸⁷

At precisely the same time as Galileo was arguing against the Aristotelian objections to motion in a vacuum and conducting experiments to attempt to verify his own theory of gravity,⁸⁸ the Aristotelian position was still being staunchly defended by so acute a thinker as Jacopo Zabarella. In his *De Motu Graviorum et Leviorum*, contained in his *De Rebus Naturalibus*,⁸⁹ the author cites Avempace's position and then attempts to refute it. But what is even more interesting than this is what he says about the recent defenders of Avempace's position who go so far as to "conduct many experiments against Aristotle's doctrine."⁹⁰ Precisely to whom Zabarella is here referring is not clear. What is clear is that Zabarella's "empiricism" did not go quite far enough for him to disagree with Aristotle on this. Rather, from our vantage point, he seems to be an arch-conservative in defending Aristotelian physics.

The Aristotelian arguments were still being defended at the end of

⁸⁷ Galileo certainly knew the arguments of both Avempace and Philoponus. In *De Motu* (ed. cit., I, p. 410) he says, "Philoponus, Avempace, Avicenna, D. Thomas, Scotus, et alii, qui tueri conantur in vacuo fieri motum in tempore . . ." See also p. 284.

⁸⁸ See Moody, *op. cit.* for a discussion of these experiments and their results.

⁸⁹ Zabarella, *op. cit.*, pp. 213-59.

⁹⁰ "Adversus Aristotelem et Averroem hi recentiores insurgunt, et aperte profitentur Aristotelem non cognovisse quae sit resistentia in motibus elementorum, immo et multa falsa dixisse in septimo physiorum de proportionibus in motu: adversus quae ipsi plura adducunt experimenta, quibus se cognovisse testantur falsas esse illas proportionibus, et hanc falsitatem processisse ex hoc falso fundamento, quod forma elementi movens ipsum non habeat a mobili aliquam internam resistentiam, sed solum externam a medio pleno." *Ibid.*, p. 221. Some of the key problems involved here will be discussed in detail in my forthcoming paper, "Experiment and Experience: A Comparison of Zabarella's View with that Expressed in Galileo's *De motu*".

the century by the more conservative branch of Aristotelians (if we can consider Zabarella to represent the "progressive strand"). The famous *Coimbra Commentaries* on the *Physics* give several interesting indications on this question.⁹¹ Here we have a clear division of the opinion on motion into two camps. Those listed as holding the impossibility of motion in a vacuum include Albert the Great, Gregory of Rimini, Averroes, Giles of Rome, Walter Burley, John of Jandun, and Albert of Saxony. On the other side are listed Avempace, Avicenna, Thomas, Scotus, and "many others" (*aliique complures*).⁹² Avempace's argument, however, is not given as careful consideration as it had been by Averroes, but is rejected with little ado.⁹³

But, by the time that Galileo was challenging Aristotle's *horror vacui*, certain ancient defenses of the vacuum had been given currency. Giordano Bruno and others adopted the Democritean-Epicurean philosophy as a basis for defending the existence of the void.⁹⁴ In addition to bringing the arguments of the Atomists to bear against Aristotle, the traditional arguments of Philoponus, Avempace, and others were by no means neglected.⁹⁵

It was, however, in the decade of the 1640's that the vacuum was finally demonstrated as a physical reality by Otto von Guericke (1602–86), Evangelista Torricelli (1608–47), Pierre Gassendi, Blaise Pascal,

⁹¹ See above note 49 and our discussion of this in the next chapter pp. 172–74.

⁹² Neither Pico nor Philoponus is here mentioned. The fact that they were included in the *aliique complures* is beyond doubt. At the beginning of the discussion of the subject of vacuum, Gianfrancesco Pico is mentioned in a marginal note as a source for information regarding those who assert the possibility of the vacuum (*ed. cit.*, II, col. 78). He is also mentioned often elsewhere in the Commentaries. This will be discussed in the next chapter.

⁹³ The clarity and conciseness with which the Aristotelian argument is here presented is rather remarkable. For example, "Si motus in vacuo tempus consumeret, sequeretur, duo corpora quantumlibet inaequali pondere posse aequali tempore quodcumque spacium vacuum decurrere, quod falsum est." (II, col. 94) or "Etenim quia nulla est proportio spacii vacui ad plenum, quoad medii resistantiam; cum in vacuo nullum corpus medium interiaceat, recte sequitur ob resistantiam medii nullum in vacuo tempus consumi." (II, col. 95).

⁹⁴ In his work *Camoeracensis Acrotismus* he argues very clearly for the existence of a vacuum. See the text in *Jordani Bruni Opera* . . . , vol. I, pars I, articles 33–37, pp. 130–43. The vacuum is also supported in a rather original way by Bernardino Telesio. See *De Rerum Natura* I, 25; *ed. cit.*, I, pp. 87–91. On the influence of Epicureanism see Tullio Gregory, "Studi sull'atomismo del Seicento: I. Sebastian Basson," *Giornale critico della filosofia italiana*, 3rd ser., XVIII (1964), pp. 38–65.

⁹⁵ See for example Francesco Piccolomini's (1520–1604) defense of the vacuum in F. Piccolomini, *op. cit.*, I, fols. 183^v–194^v where the views of Philoponus as well as those of Leucippus, Democritus, Epicurus, Lucretius, and the Stoics (for the Stoic theory of the void see Duhem, *Système I*, pp. 301–13) are given. See also *Francisci Piccolominei Senensis . . . De Rerum Definitionibus* (Venice, 1600), fol. 167^v–168^r. Another opponent of Aristotle was Giambattista Benedetti, author of a treatise against the Aristotelian position, *Demonstratio proportionum motuum localium contra Aristotelem et omnes philosophos* . . . (Venice, 1554). See particularly A. Koyré, *Études galiléennes* (Paris, 1939), I, pp. 41–54 and *idem*, "Jean-Baptiste Benedetti, critique d'Aristote," *Mélanges offerts à Étienne Gilson* (Toronto–Paris, 1959), pp. 351–72.

and others.⁹⁶ The ground had been paved on a theoretical plane for these men by the various arguments against Aristotle, both by thinkers such as Galileo, who had scientific interests, and others such as Pico, who had no interests other than destroying the confidence in Aristotle's philosophy. Pico cannot, certainly, claim a central role in the demonstration of the possibility of a vacuum, but he does provide one connection to the seventeenth century which is not without some interest.

One of the key figures of seventeenth century science and philosophy was Pierre Gassendi. Early in his career (ca. 1620) he conceived the idea of writing a huge work against the still predominant Aristotelian philosophy and science. That this book was to be organized along the same lines as the *Examen Vanitatis* we will show in the next chapter. The sections of this work which were to be concerned with a detailed analysis of Aristotelian physics either were never completed or do not survive. From the two books which do survive we can see that Gassendi's early ideas regarding a criticism of Aristotle's rejection of the void were in large measure derived from Pico's work,⁹⁷ and from the tradition which it summed up.

In the preface to the First Book of his *Exercitationes paradoxicae adversus Aristoteleos*,⁹⁸ Gassendi sets out the program for the other books which were to follow. In Book III, Aristotelian physics was to be treated.⁹⁹ Although this book does not survive, Gassendi's plan was to treat motion, place, time, and vacuum, precisely the things criticized by Gianfrancesco Pico in the *Examen Vanitatis*. In the First Book of the *Exercitationes*, Gassendi outlined briefly his program and several times gives us a brief glimpse of what he thinks of Aristotle's criticism of the vacuum.¹⁰⁰ Later in the same work he reiterates the same thing.¹⁰¹ Gassendi never

⁹⁶ For the experimental and technological development of vacuum producing apparatus see Ernst Mach, *Die Mechanik in Ihrer Entwicklung*, 6th ed., (Leipzig, 1908), pp. 107-25; Charles Singer, et. al. (eds.), *A History of Technology* (Oxford, 1954-58) III, pp. 330-34; and most interesting of all Gassendi, *ed. cit.*, I, pp. 203-16, the chapter entitled "De nupero grandisculi coacervative inanis, ope hydrargyri, experimento." For the early seventeenth century discussions of vacuum see Cornelis de Waard, *L'expérience barométrique: ses antécédents et ses applications* (Thouars, 1936); E. J. Dijksterhuis, *The Mechanization of the World Picture*, trans. C. Dikshoorn, (Oxford, 1961), pp. 444-57; and the articles by Michelle Sadoun-Goupil and Bernard Rochot in *Revue d'histoire des sciences et de leurs applications*, XVI (1963), pp. 23-76.

⁹⁷ Gassendi will be treated more fully in the next chapter and further bibliographical information will be given there.

⁹⁸ *Ed. cit.*, III, pp. 98-210.

⁹⁹ *Exercitationes*, preface; III, p. 102.

¹⁰⁰ In *Exercitatio* V, "Quod apud Aristotelem innumera deficient" section 7, he says the following, "Capite 9 [i.e. book IV of the *Physics*] quando ex motus celeritate probat non dari vacuum: concludit contra vacuum separatum, non contra respersum, quale ponebant veteres." *Ibid.*, III, p. 128a

¹⁰¹ "Libro IV [i.e. of the *Physics*], falsum videtur et quod *Locus* sit superficies, et quod non

did quite develop his argument in the terms he envisioned when he wrote the First Book of the *Exercitationes*. Rather, during the next decades he came to derive more and more inspiration from the Epicurean physics and from the contemporary experimental view of natural philosophy which was just developing.

The mature expression of his thought on the subject of vacuum is quite different from his early, sketchy discussion of the matter.¹⁰² He tends to think much less in terms of simply a refutation of Aristotle, but rather in terms of physical reality. The historical sources which he favors are those of the atomistic tradition, but it is significant that he still mentions Philoponus as being important.¹⁰³ By this time Gassendi devotes himself primarily to the empirical side of the problem, rather than to theoretical considerations. Much of his discussion is devoted to enumerating various mechanical means – some which of had been utilized, others not – of actually achieving a vacuum (or at least approaching one) in fact.¹⁰⁴

(6) Conclusion

Pico acted as an intermediary for both the Arabic-Hebrew tradition of Hasdai Crescas and for the important “digression” of John Philoponus. The problem of the vacuum was already an old one by the beginning of the sixteenth century, but it was a crucial one, for it proved to be a philosophical concept, which was ultimately accessible to experimental verification. Technological development in the course of the sixteenth and early seventeenth centuries reached the point at which a vacuum was actually realizable.¹⁰⁵ The “philosophical” or “theoretical” side of the issue evolved at the end of the sixteenth century on the one hand to Benedetti and Galileo and on the other to the defenders of the Aristotelian position (e.g. Jacopo Zabarella and the Coimbra Commentators). The question was not ultimately resolved until nearly the middle of the next century and, even then, a major figure in the final acceptance of the vacuum as a physical reality, such as Gassendi, was still nurtured on Pico’s completely “unscientific” anti-Aristotelianism.

detur vacuum, et quod Tempus sit mensura motus.” *Exercitationes* V, 6; vol. III, p. 140a. The Italics are in the edition cited.

¹⁰² He treats the subject at length in the *Syntagmatis Philosophici Pars Secunda, quae est Physica*, lib. II, cap. 2–6 (*ed. cit.*, I, pp. 185–216).

¹⁰³ “... quod videtur adnotatum dignum, Philoponum, unum ex praecipuis Aristotelis interpretibus, instituta una satis longa adversus Aristotelem digressionem ut ostendat Locum esse non Superficiem, sed Intervallum Veterum, quod sua natura incorporeum, ac Inane sit;” *Ibid.*, I, p. 186b.

¹⁰⁴ *Ibid.*, cap. 4–5; pp. 196–216.

¹⁰⁵ See above our note 96.

Again, Pico achieved a role – one which would have doubtlessly displeased him greatly – in the establishment of the “new science”, which was to eventually replace that of Aristotle, and to prove in the long run to be even more damaging to Pico’s values of philosophy and religion than the old one had been.

Gianfrancesco Pico, in his determined effort to demonstrate Aristotle to be in error, hit upon some rather important notions. In Pico’s rather confined view, however, the demonstration that Aristotelian philosophy was in error was considered to be sufficient to show that human reason could never reach *sincera veritas*. For him, such a demonstration would be adequate to show that the reliance on “human philosophy” should be abandoned forever. Apparently it never occurred to him that such a destruction of the foundations of Aristotelian science might have another consequence, that from it could develop a “new science” to take the place of the one which had been discredited. Little did he realize that this various criticisms might themselves be utilized as key notions in a quite different science which would eventually make just as many claims as the Aristotelian one had ever made.

His counter arguments to Aristotelian physics soon became absorbed in the sixteenth century discussions of these problems. Whereas he combatted Aristotle in the name of religious truth, these same arguments were utilized by many of his successors in the name of scientific truth. But his criticisms of Aristotle also gained wider attention than merely as part of the scientific discussions of the century. Let us now turn to an evaluation of the impact that the *Examen Vanitatis* had on the philosophy of the next decades.

THE INFLUENCE OF THE EXAMEN VANITATIS ON LATER THOUGHT

Illustre exeunte seculo decimo quinto et ineunte sexto erat nomen Picorum. Nec enim Joannes Picus solum Mirandulanus magnam nominis sui famam fuit adeptus, sed etiam hic Joannes Franciscus Mirandulanus, illius ex fratre Galeoto Pico nepos, licet ad Joannis patrum gloriam frustra adspiraret.

B. G. Struve, Rerum Germanicarum scriptores (1717)

(1) *Introduction*

We have had occasion already to mention certain of the later thinkers who were influenced in one way or another by the *Examen Vanitatis*. It now remains for us to indicate more precisely and in greater detail just what effect the printing of Pico's work had on the intellectual world of the sixteenth century. The publication of the *Examen Vanitatis* in 1520 by no means had an earthshattering effect on contemporary intellectual life. On the other hand, little by little it was absorbed into the general philosophical tradition and, as we shall see, was not without influence.

The thesis was advanced early in the present century that Pico's work was a major source for the sceptical attitude portrayed in Montaigne's *Apologie de Raimond Sebond*. Later, more careful, study has shown that although there are certain similarities between the works of Pico and Montaigne, there is no evidence to indicate a direct connection between the two. Rather, it appears that they both drew upon a common source, Sextus Empiricus.¹ It has also been argued that Pico's *Examen Vanitatis* exerted a major influence on Cornelius Agrippa of Nettesheim's work of similar title, *De incertitudine et vanitate scientiarum* (1527). Although the matter deserves a more careful investigation than we have been able to give it, we find that little or no conclusive evidence

¹ The case for Pico's influence was argued by Fortunat Strowski, *Montaigne* (Paris, 1906), pp. 124-34; 2nd ed., 1931. The opposite position was presented by Pierre Villey, *Les sources et l'évolution des essais de Montaigne* (Paris, 1908), II, pp. 166, 324-25.

has thus far been advanced in support of this thesis.² We find that Pico's and Agrippa's respective works are significantly different in outlook and inspiration and that the new material which Pico added to the sixteenth century discussions finds no place in Agrippa.

In a recent attempt to evaluate the effect which scepticism had on early modern thought, Popkin³ denies that the *Examen Vanitatis* had much impact. He sees it, rather, as an isolated example of scepticism and finds little connection between it and later manifestations of scepticism. In this, Popkin seems to go too far, for although Pico's work did not have the immediate impact of the writings of Montaigne, Bayle, or Descartes, it was by no means unknown. As we hope to be able to show, the *Examen Vanitatis* exerted a definite, if modest, influence on a number of thinkers of the sixteenth and seventeenth centuries. It was not always influential as a fountain of scepticism; more often it was seized upon as a sourcebook for the rising tide of anti-Aristotelianism. But even leaving aside other lines of influence derived from the work, we find that the development of later scepticism draws upon Pico to a greater extent than Popkin seems willing to admit.

In writing this chapter we plan to focus specifically on the *fortuna* of the *Examen Vanitatis*, leaving aside Pico's influence in other areas. We shall cover chronologically a number of later thinkers who seem to have made use of Pico's work in one way or another.

(2) *Mario Nizolio*

One of the earliest writers to make use of Gianfrancesco Pico's philosophical writings was the humanist Mario Nizolio⁴ (1488-1567). Nizolio became famous in his own day as a Ciceronian, primarily through his well-known and much disputed *Thesaurus Ciceronianus* (1535), a Latin lexicon containing only those words appearing in the Ciceronian writings. It went through many editions⁵ and gained for the author a wide reputation as a Ciceronian. Indeed, much of his

² The thesis was given by Villey, *op. cit.*, II, p. 166 and has been repeated by Paola Zambelli, "A proposito di 'de vanitate scientiarum et artium' di Cornelio Agrippa," *Rivista critica di storia della filosofia*, XV (1960), p. 179. Our reasons for disagreeing with Villey and Zambelli require a somewhat more extensive discussion than we give here. See Appendix C for a detailed discussion.

³ Richard H. Popkin, *The History of Scepticism from Erasmus to Descartes* (Assen, 1960), pp. 19-22. Although I disagree somewhat with Popkin's evaluation of Pico, I have found his book very useful in preparing my study.

⁴ For a recent survey of the life and works of Nizolio and an ample bibliography see Quirinus Breen's introduction (pp. I-LXXIV) to his edition, Mario Nizolio, *De veris principiis et vera ratione philosophandi contra pseudophilosophos* (Rome, 1955), 2 vol.

⁵ Breen, *op. cit.*, I, pp. XXIII-XXVI.

later activity was taken up with controversies arising from this work, the author becoming one of the century's most prominent defenders of Ciceronianism.

Nizolio's most important later work was the *De veris principiis et vera ratione philosophandi contra pseudophilosophos* (1553), a work in the rhetorical, anti-metaphysical tradition of Lorenzo Valla and the humanist logicians of the fifteenth and sixteenth centuries. This work was reprinted in the next century by Leibniz,⁶ who praised Nizolio highly in his introduction. The work is essentially a criticism of the more traditional Aristotelian-Scholastic philosophy and a defense of the humanist-rhetorical tradition of Bruni, Valla, Agricola, Vives, and Ramus. In the first chapter⁷ entitled "Summatim quaenam sint principia generalia veritatis investigandae recteque philosophandi," Nizolio indicates his strong emphasis on rhetoric, grammar, and the study of the approved authors. He proposes this program in place of the Scholastic emphasis on dialectic and metaphysics. This theme runs throughout the book. It is a focus somewhat different from that of Gianfrancesco Pico, whose polemic against the pagan philosophers, especially Aristotle, revolves around their alleged incompatibility with Christianity. The censure of the pagan philosophers as being fundamentally at odds with Christianity, which appears on nearly every page of the *Examen Vanitatis*, is not to be found in Nizolio's work.

The point of contact between Nizolio and Pico lies in Book IV of the *Examen Vanitatis*, where Gianfrancesco assembles a large number of humanist criticisms against Aristotle. This is only a part of his polemic and not the focal point of his treatise, as it is with Nizolio and others whose chief concern is that of the professional grammarian and rhetorician. Included in Pico's critique is an attempt to show that the textual tradition of the *corpus Aristotelicum* leaves grave doubts concerning the authenticity of many, if not all, of the works therein contained. Nizolio repeats this same criticism in his *De veris principiis*.⁸ After citing many of the same arguments that Pico had cited forty

⁶ Marii Nizolii *De veris principiis et vera ratione philosophandi contra pseudophilosophos, libri IV. Inscripti illustrissimo Baroni a Boineburg. Ab editore G. G. L. L. qui dissertationem praeliminarem de instituto operis atque optima philosophi dictione, epistolam de Aristotele recentioribus reconciliabili notasque atque animadversiones marginales leniendo textui adiecit* (Frankfurt, 1670). It was reprinted four years later with only the title page being altered. For a recent study of this work, besides Breen, see Paolo Rossi, "La celebrazione della retorica e la polemica antimetafisica nel 'De Principiis' di Mario Nizolio" in *La Crisi dell'uso dogmatico della ragione*, ed. Antonio Banfi, (Rome-Milan, 1953), pp. 99-121. We will discuss Leibniz below pp. 180-81.

⁷ Breen, *op. cit.*, I, pp. 21-30.

⁸ *Ibid.*, II, pp. 165-75, chapter 6 of Book IV.

years earlier, he refers to Gianfrancesco as a source to be consulted by the reader wishing to pursue the matter further:

But I can now put an end to this topic, if I here briefly mention the titles of some chapters pertaining to the uncertainty of Aristotle's books, which writings Gianfrancesco Pico della Mirandola left us in Book IV of his *Examen vanitatis doctrinae gentium*. The first of these is: "It is proven in many ways that it is uncertain whether we have any book, the originals of which were truly composed by Aristotle." [And] Chapter 4: "That even if we have some books, which were justly and legitimately written by Aristotle, it is nevertheless uncertain whether there is anything in these books which is genuinely Aristotle's; and, what is actually his and what is not his cannot be distinguished."⁹

In playing the tradition of humanist rhetoric as epitomized by *Cicero Philosophicus* against the tradition of the philosophy of Aristotelian Scholasticism, Nizolio mentions Pico only as a humanist critic of Aristotle, neglecting his more serious metaphysical, physical, and epistemological criticisms. This becomes particularly apparent in the chapters of the *De veris principiis* which deal with topics to which Pico devoted particular attention, such as the Aristotelian doctrine of scientific demonstration.

(3) *Giulio Castellani*

If Nizolio drew from Gianfrancesco's "humanist criticism" of Aristotle and paid little attention to the bulk of his polemic, much different was the philosopher from Faenza, Giulio Castellani (1528-86).¹⁰ After completing his studies at Bologna and Ferrara, Castellani published a work which attacked Cicero's *Academica* because of the sceptical arguments there presented. This book, *Adversus Marci Tullii Ciceronis acade-*

⁹ "Sed jam finem huic capiti imponam si breviter hic subjecero inscriptiones quorundam capitum ad incertitudinem librorum Aristotelis pertinentium, quas Joannes Franciscus Picus Mirandola in quarto libro Examinis sui vanitatis doctrinae gentium scriptas reliquit. Quarum haec est prima: "Probatur multipliciter incertum esse an ullum habeamus librum cuius exemplaria vere fuerint ab Aristotele composita." Capitulum quartum: "Quod et si aliquos etiam habeamus libros, qui juste atque legitime inscribantur Aristoteli, incertum nihilominus esse utrum eis in libris aliquid sit quod sincere sit Aristotelis; nec internosci posse quid eius proprium quid alienum." *Ibid.*, II, p. 175. Here are quoted the precise titles of chapters 4 and 5 of Book IV of the *Examen Vanitatis*. See Pico, *ed. cit.*, pp. 668-74 and chapter III, pp. 63-67.

¹⁰ Little attention has been given this man by modern scholars. Some information is available in *Opuscoli Volgari di Mes. Giulio Castellani editi e inediti* pubblicati per cura di F(rancesco) Z(ambrini) F(aentino), (Faenza, 1847), pp. VII-XXI; Antonio Montanari, *Gli uomini illustri di Faenza* (Faenza, 1882-86), I, part I, pp. 63-66; and Garin, *La filosofia*, II, pp. 39-43. See also Charles B. Schmitt, "Giulio Castellani (1528-1586): A Sixteenth Century Opponent of Scepticism," *Journal of the History of Philosophy*, V (1967), pp. 15-39.

micas quaestiones disputatio (1558),¹¹ is devoted largely to a defense of Aristotle against the *Academica*, which contains extensive sceptical arguments directed against dogmatic philosophy. Although Cicero's work deals especially with Stoicism, Castellani interprets the criticism as being directed against the Aristotelian theory of knowledge and attempts to defend it.

In the dedication letter to the work,¹² Castellani states that recently he has found the leisure to read the *Academica*; but, he has found that Cicero said much about the fallibility of the senses with which he cannot agree. Therefore, he will explain the opinion of the Peripatetics (*sententiam Peripateticam*) on the matter. "All [the dogmatic philosophers], in my judgment," he continues in Chapter One, "were more rightly philosophers than the sceptics, . . . but we have not decided here to attack all of the arguments of the sceptics, but only to show that the reasons of Cicero are false and to answer them in an Aristotelian fashion."¹³ Included in Castellani's counterattack on the *Academica* is a chapter¹⁴ devoted to refuting the arguments of Gianfrancesco Pico drawn from the more deep-seated scepticism of Sextus Empiricus. He characterizes Pico as an opponent of Aristotle, also stating the opinion of his uncle, Pier Nicola Castellani,¹⁵ regarding him:

Sense (as Aristotle says) is certainly true regarding its proper objects, or at least it rarely incurs falsity.¹⁶ On this point Gianfrancesco Pico very boldly opposes Aristotle and all of the Peripatetics. My uncle Pier Nicola Castellani, an outstanding man in both Greek and Latin literature, in the art of healing, and in every philosophical study (would that he were alive!), considered him to be very outstanding both in teaching and in keenness of wit, and would have called him "the philosopher *par excellence*" among the philosophers of his age, unless he had brought forth many things against Aristotle,

¹¹ The full title of this work which was printed at Bologna for the first, and apparently only, time is *Iulii Castellani Faventini adversus Marci Tullii Ciceronis academicae quaestiones disputatio, qua omnium pene philosophorum opinio de percipienda veritate comprehenditur et Aristotelis prae omnibus celebratur philosophia* (Bologna, 1558).

¹² *Ibid.*, pp. 19-24.

¹³ "Qui omnes [i.e. dogmatici] rectius quidem, meo iudicio, quam Sceptici, fuerunt philosophati . . . hic enim argumentorum omnium, quae a Scepticis afferuntur, acervum facere non decrevimus, sed Ciceronis rationes tantum refellere, eisque Aristoteleo quodam more respondere." *Ibid.*, pp. 34-35.

¹⁴ *Ibid.*, Chapter X, pp. 93-103. The title is "Confirmantur Luculli dicta de sensuum perspicuitate et Ioannis Francisci Pici argumentis respondetur, quae Aristotelis philosophiam videntur destruere."

¹⁵ I have not been able to identify the source of this. Less information is available on Pier Nicola than on Giulio Castellani. See, however, Antonio Montanari, *op. cit.*, I, part II, pp. 61-62.

¹⁶ *De anima* 427b11-13.

his senior and the teacher of all learned men, and unless he had tried with all of his might and zeal to destroy such a man's philosophy. But, so help me heaven, learned and clever men are not lacking in our own age, who explore new methods of philosophizing and who toil to diminish the immortal glory of Aristotle. The judgment of how much these men accomplish shall be left to others.¹⁷

The picture of Pico which Castellani gives us is of a man with great ability, but of one who has devoted his gifts to a destruction of philosophy rather than to its praise. Here already is a faint premonition of the abuse that will be heaped on the revivers of scepticism later in the same century and even more intensely in the next.

Castellani then discusses Gianfrancesco's scepticism in greater detail. He first considers the sceptical arguments as set forth in the *Examen Vanitatis* – the senses of individual men are different, the senses of the same man are different at different times, etc. For these and other reasons, Pico has concluded that there is no certainty to be found in sense experience, but only "great variety and frequent change."¹⁸ Pico contends furthermore, Castellani continues, that the different temperaments (*temperamenta*) of a man at different times make the senses perceive in an ever changing way.¹⁹ Here, in summary form, are Pico's most characteristic and most forceful arguments, drawn from the *Examen Vanitatis*. What does Castellani have to say about them? He does not reject Pico's scepticism by merely giving us a vague praise of truth or a blanket condemnation of the evils of the sceptical position. He focuses clearly on the real issue and tries to meet Pico on his own terms by arguing that he has not correctly analyzed the empirical data. He attempts, in short, to give arguments which are meaningful to the sceptic, saying, "Yes, there is a grain of truth in what you say, but you have not correctly interpreted the data, which we both have before us."

¹⁷ "Nam sensus (ut ait Aristoteles) propriorum quidem est verus, aut raro admodum suscipit falsitatem. Hic Aristoteli omnibusque Peripateticis Ioannes Franciscus Picus multum audacter obstitit. Quem Petrus Nicolaus Castellanius patruus meus, vir quidem Graecis et Latinis literis, medendi arte, et omni philosophiae studio clarissimus (qui utinam viveret) et doctrina et acumine ingenii praestantissimum valde admirabatur, eumque inter suae aetatis philosophos φιλοσοφώτατον appellasset, nisi multa adversus Aristotelem protulisset maximum illius et eruditorum omnium praeceptorem, nisique tanti viri destruere philosophiam omni labore et studio contendisset. Sed ita me Diī ament, hac nostra aetate non desunt eruditi ac ingeniosi homines, qui novas indagarunt methodos philosophandi immortalemque Aristotelis gloriam imminuere elaborarunt. Qui sane quantum profecerint, aliorum sit iudicium." Castellani, *op. cit.*, pp. 95–96.

¹⁸ *Ibid.*, p. 97. Such arguments are to be found throughout Pico's work. Perhaps one of the most characteristic statements is to be found in *Ex. Van.* IV, 12; p. 687. See also II, 22; pp. 560–64 and our discussion above in chapter IV, pp. 86–96.

¹⁹ Pico treats this in chapters two and three of Book V (pp. 695–707).

Castellani first insists that in every mixture of the four elements (by which the temperaments of men are determined), there must be one that dominates and this determines how the impressed species will be received. Therefore, he continues, there cannot be as many and as diverse temperaments of the human body as Pico claims. Averroes and Galen admit that there are some discrepancies in the received species, but they never say that there is an infinite variety, as Pico implies. Moreover, they never assign these to what properly are called the organs of sense. The *sensoria* are disposed in nearly all men in the same way, if they are not injured or defective, argues Castellani. He attempts to substantiate this remark by giving what seems to be a series of rather sound arguments. Particularly convincing and noteworthy for its strongly empirical ring, as contrasted to much of the argument from authority which runs through sixteenth century philosophy, is the following:

... certainly that organ of sight in individuals, which is called the pupil, is so constituted by the four elements that in it water largely dominates, which is easily distinguished in the dissection of human bodies; for nothing purer, nothing whiter, nothing more transparent can be seen, as I remember having formerly seen myself in the very famous school at Padua, when it was done in the public anatomy [demonstration] by Gabriele Falloppio.²⁰

Although based upon an outdated medical theory, Castellani's reliance on the data of observation has a distinct similarity to the attitude which empirical philosophers will increasingly assume in the succeeding centuries.²¹ Instead of relying on authorities to refute the sceptical arguments concerning the fallibility of the senses, Castellani has looked to the anatomical dissecting room to learn something about the operation of the sense organs themselves. He then concludes that, with rare exceptions, the senses are generally reliable and what pertains to them is "true and certain." ²² "Why," Castellani asks, "if the

²⁰ "... quippe quod in singulis visus organum quod pupilla dicitur, ita ex quatuor elementis constitutum est, ut in eo maxime aqua dominetur, quod facile in humanorum corporum sectione conspicitur: nihil enim purius, nihil candidius, nihil magis perspicuum videri potest, ut quondam memini me vidisse in celeberrimo Patavino gymnasio, cum ab excellentissimo Gabrieli Falloppio publica anatome fieret." Castellani, *op. cit.*, p. 99. Gabriele Falloppio (1523-62) was, of course, the famous Italian student of Vesalius and one of the foremost anatomists of his time. He was professor of anatomy at Padua from 1551 until his death. On his particular contributions to the study of the anatomy of the eye see Giuseppe Ovio, *Storia dell' oculistica* (Cuneo, 1950), I, pp. 241, 243, 259, 260, etc. Falloppio's career at Padua is treated by Giuseppe Favaro, *Gabriele Falloppio, modenese* (Modena, 1928), esp. pp. 85-146.

²¹ For one example see the works cited below on Gassendi.

²² "... Cum ergo sensoria naturalem suam in cunctis hominibus et semper temperationem conservent, profecto sensus vera et certa, quod ad eos attinet, pronunciare poterunt: quoniam tametsi aliquantulum eorum organa mutantur: non tamen proprium et naturale

organs of my senses change hour by hour and day by day, do my ears always grasp the same measured verse in hymns . . . ?" ²³ In view of these things, they who attempt to censure Aristotelian philosophy by merely indicating a variability in sense knowledge must beware lest they do so too arrogantly and too rashly. It is not quite as easy as they may think to refute "Aristotle, the prince of all philosophers." ²⁴

A further echo of the polemic against Pico appears in chapter 22, which is directed against the sceptics' abhorrence of dogmatic philosophy. Besides what Cicero has told us about scepticism, similar arguments have been expounded by other writers, Castellani continues. He singles out for particular mention Diogenes Laertius, who wrote a *Life of Pyrrho*, and others "who have added many arguments from Sextus Empiricus' opinion and have investigated them extensively and judiciously." ²⁵ The "others" of whom Castellani speaks here seems certainly to refer to Pico, who was perhaps the only man of his time to pay much attention to the writings of Sextus Empiricus.²⁶ The first printed edition of the writings of this author appeared more than forty years after the first edition of the *Examen Vanitatis*; ²⁷ and, although a number of manuscripts were available,²⁸ there is little evidence that they were much read. Gianfrancesco Pico, as we have seen, made copious use of the writings of Sextus in the *Examen Vanitatis* and mentions him often.

ipsorum temperamentum variabitur, ac de illis perinde evenire crediderim, ut de cerebro accidit . . . Ita profecto sensuum instrumenta in diversis hominibus, ac in iisdem diversis temporibus aliquantulum in suo naturali temperamento intendi ac remitti possunt. Verum eiusmodi mutatio tantas non habebit vires, ut diversas fallacesque sensuum operationes reddere possit." *Ibid.*, pp. 100-101.

²³ *Ibid.*, p. 102.

²⁴ "Caveant igitur isti, ne philosophorum omnium facile principem Aristotelem nimis arroganter ac temere reprehendant, dum conantur iis suis diversis temperamentis perspicuitatem sensus destruere, quae est demonstrandi artis ac omnis nostrae cognitionis origo et fundamentum." *Ibid.*, pp. 102-103.

²⁵ "Verum, cum Laertius Diogenes in Pyrrhonis vita ac alii ex Sexti Empirici sententia multas adduxerint causas et eas copiosius elegantiusque pertractarint, ego istas brevibus explicare decrevi." *Ibid.*, p. 170.

²⁶ See Popkin, *op. cit.*, p. 21. Although there are translations of Sextus which date from an earlier period, they do not seem to have been much used. See for example Clemens Baeumker, "Eine bisher unbekannte mittelalterliche lateinische Uebersetzung der Πυρρώνειοι 'Υποτύψεις des Sextus Empiricus" in *Archiv fuer Geschichte der Philosophie*, IV (1890-91), pp. 574-77.

²⁷ The first Latin translations of Sextus' works appeared in 1562 and 1569. The Greek text was not printed until 1621. See our discussions of the translations below. For further information see Popkin, *op. cit.*, pp. 17-18.

²⁸ On this point see Hermann Mutschmann, "Die Ueberlieferung der Schriften des Sextus Empiricus," *Rheinisches Museum fuer Philologie* LXIV (1909), pp. 244-83, 478, who lists and describes most of the extant manuscripts of Sextus. For a few additions not known to Mutschmann, see Popkin, *op. cit.*, pp. 17-18, esp. note 3, p. 17.

In Castellani we have seen a rare attempt to meet Pico's criticism of Aristotelian epistemology. It is somewhat strange that Pico's critique did not arouse greater opposition, because a great deal of effort was expended by the philosophers of the sixteenth century in various controversies over methodology.²⁹ Although Pico's polemic followed a somewhat different pattern than was usual, the center of its focus was on the important *Posterior Analytics* and a major part of his effort was aimed at discrediting the Aristotelian theory of "scientific demonstration." Why it did not catch on is a problem which we cannot go into here, but the *Examen Vanitatis* is by no means a rare work even now,³⁰ and it must have gained a certain amount of diffusion. It certainly reproduces the major sceptical arguments from antiquity, the same ones which will have great success after the publication of translations of Sextus' writings.³¹ Perhaps early sixteenth century philosophers were more interested in debating the question of methodology on the familiar grounds of a three-way battle between Galen, Aristotle, and Cicero – to simplify the struggle to its major components. Although the sceptical question is one of the most obvious that can be asked in philosophy, it is not always the most obvious to the philosophers embroiled in a particular controversy. It is perhaps the most basic problem *per se*, but it is seldom the first one asked by philosophers, for dogmatism must come first before the sceptical question is really meaningful. The normal course of philosophical thought in an epoch is to proceed from dogmatism to scepticism.

(4) *Latin Translations of Sextus Empiricus*

This leads us into the problem of what, if any, relation there is between the revival of interest in the writings of Sextus Empiricus by Pico della Mirandola and the first Latin editions of the works of Sextus by Henri Estienne and Gentian Hervet. No mention is made of Gianfrancesco in Estienne's preface to the first of Sextus' works to be printed in 1562, and there is no clear indication that he knew of Pico's work. When the larger work against the mathematicians was published seven years later, however, the translator, Gentian Hervet, has the following to say in his preface:

²⁹ For a recent survey of these arguments and ample bibliographical notations see Neal Ward Gilbert, *Renaissance Concepts of Method* (New York, 1960).

³⁰ See above chapter II, note 33, and Appendix A.

³¹ For the extent of this influence see Popkin, *op. cit.*

³² The Latin translation of *The Outlines of Pyrrhonism* which first appeared in 1562, at Paris.

Just how useful Sextus Empiricus' commentary can be in upholding dogmas of the Christian religion against outside philosophers, Gianfrancesco Pico della Mirandola has beautifully taught us in that book in which he upholds Christian philosophy against the dogmas of outside philosophers.³³

Here perhaps we have a clearer and more accurate evaluation of Pico and his endeavor than we have hitherto encountered. Hervet seems to be one of the few who realized precisely what Pico was getting at. He sees Gianfrancesco as one who has safeguarded the Christian religion against the onslaught of dogmatic philosophers. Hervet believed, as Pico did, that a sceptical attitude toward the various polemics among dogmatic schools of philosophy is the best safeguard for Christianity.³⁴ The truth of this, of course, has been argued many times since.

In addition to this single reference to Gianfrancesco Pico, it would be interesting to determine if he might have had further influence on the translations of Sextus, but this would carry us somewhat beyond the confines of this chapter. Suffice it to say that there are significant terminological differences in the way Pico, Estienne, and Hervet translate key sceptical terms. Such an example is the word κριτήριον, which means the "standard of judgment" or, perhaps even better, "criterion," if we wish to use an English cognate. Pico rendered this term by *iudicatorium*, as he said, analogously with the translation of ἀισθητήριον by *sensorium*.³⁵ Estienne, on the other hand, generally used *criterium*, and *iudicatorium* only rarely.³⁶ Hervet preferred the clause *quod iudicat*, but in the index to his translation and in his marginal annotations, he used *iudicatorium* to render the same idea.³⁷ There may be any of a number of reasons for these various translations of the term and we cannot say with any degree of assurance that knowledge of Pico's works had anything to do with it.

The introduction of the term *iudicatorium* by both Estienne and Hervet may be derived from Pico's preference for it, but we do not

³³ "Quanto usui autem esse possit Sexti Empirici commentarius ad tuenda Christianae religionis dogmata adversus externos philosophos, pulchre docet Franciscus Picus Mirandulanus in eo libro quo Christianam tuetur philosophiam adversus dogmata externorum philosophorum." *Sexti Empirici . . . Adversus Mathematicos . . . Gentiano Herveto interprete . . .* (Paris, 1569), fol. a2^v.

³⁴ On Hervet see the article by A. Humbert in *Dict. de théol. cath.*, VI (1920), cols. 2315-20.

³⁵ He does this neatly in *Ex. Van.* II, 1; p. 537. See our discussion above in chap. II, pp. 50-51. The word *iudicatorium*, although rather rare, had been used to render κριτήριον at least once before. See *Sancti Thomae Aquinatis . . . Opera (ed. cit.)*, XX, p. 496a, line 4. This is the *translatio antiqua* of the *Metaphysics*, 1063a3. For a fuller discussion of the relation of Pico's translation to the later ones see Appendix B.

³⁶ Sextus Empiricus, (1569 edition), p. 498. Also see p. 574a for Estienne's considerations on the various possibilities for translating κριτήριον.

³⁷ For example see the marginal notes in the Paris, 1569 edition, pp. 120-21.

have any definite evidence to substantiate this. At any rate, the word was not completely accepted by them and it was "*criterium*" which was taken into the European vernacular languages to render the idea.³⁸

(5) *Giovanni Battista Bernardi*

Let us now consider the discussions of the *Examen Vanitatis* toward the end of the century. It, along with Pico's other writings, was given some attention by the Venetian Giovanni Battista Bernardi.³⁹ Bernardi is responsible for a sort of "dictionary of philosophical quotations," the *Seminarium totius philosophiae*.⁴⁰ This enormous work, consisting of over 4,000 folio columns, collects the opinions of a number of philosophers on a wide variety of topics, arranged alphabetically by subject. The first two volumes contain the opinions of the philosophers of the Aristotelian tradition, the third those of the Platonic tradition, and the fourth principally those of the other ancient schools and of Avicenna. The printing history indicates that this work had some success, although it seems that relatively few copies survive⁴¹ and its compiler has been nearly forgotten.

What is interesting about this work with regard to Gianfrancesco Pico is that he is included in the third volume with the philosophers of the Platonist tradition. In all probability, this is because his uncle had Platonist leanings and the works of both were published together in 1572-73. In fact, when one reads through the list of authors cited in volume three of the *Seminarium*,⁴² he is struck by the incompatibility of the inclusion of Gianfrancesco with the others, although his anti-Aristote-

³⁸ See however, the work of Bernardi discussed below which continues the transmission of Pico's term.

³⁹ Of the scanty information available on Bernardi, perhaps best, but by no means satisfactory, is Giammaria Mazzuchelli, *Gli scrittori d' Italia* . . . (Brescia, 1753-63) II, pp. 966-67.

⁴⁰ The full title of the work is *Seminarium totius philosophiae: Opus sane admirabile et omni eruditorum generi perquam utile: Quod Platonis ac Aristotelis eorundemque interpretum tam Graecorum, quam Latinorum ac etiam Arabum questiones, conclusiones, sententiasque omnes integras et absolutas miro ordine digestas complectitur; ut quivis uno intuitu et sine ullo labore, quicquid unquam a summis sapientiae magistris dictum fuit, perspicere, et eorum opera omnia in unum velut locum collecta habere possit. Nunc etiam nova appendice infinitisque theorematibus ex antiquorum philosophorum et universa Avicennae logica ac philosophia collectis auctum et locupletatum*. The first edition of this work appeared in Venice in 1582-85.

⁴¹ According to Mazzuchelli (*op. cit.*, II, p. 966), it was printed three times at Venice and once at Lyon. Although no copy is listed in the British Museum catalogue, that of the Bibliothèque Nationale lists three copies and there is one at the Biblioteca Nazionale Centrale in Florence.

⁴² *Ioannis Baptistae Bernardi . . . Seminarium . . .* (Venice, 1599), I, fol. 3^v-4^r. The pagination refers to the copy in the Biblioteca Nazionale Centrale in Florence. The list is included in volume I, but refers to volume III. I do not know whether all of the copies of the Venice, 1599 edition are bound in this way or whether it is a peculiarity of only this copy. All further references are to this copy.

lianism puts him in good company with Francesco Patrizi. One is further struck by the fact that Pico is among the dozen or so writers of the sixteenth century included in the work as a whole. It is quite possible that a number of later references to Gianfrancesco were copied from this source, for each of the entries is accompanied by an indication of chapter and page.

Bernardi recognized what Gianfrancesco Pico had been trying to do and cited a surprising number of his most characteristic opinions. Here we can give only a sampling of many opinions which Bernardi cites from the 1573 edition of Pico's *Opera*. His anti-Aristotelianism and scepticism are adequately summarized by citing his opinion on *Aristoteles*,⁴³ *iudicarium*,⁴⁴ *falsum*,⁴⁵ *sensus*,⁴⁶ *Sceptici*,⁴⁷ and *veritas*.⁴⁸

The *Examen Vanitatis* – and the anti-Aristotelianism and scepticism which it contained – was well represented in Bernardi's dictionary-like work. This, of course, makes Pico's thought more accessible to later writers. It also increases the problem of tracing his direct influence, since a work like Bernardi's, which cites even chapter and page number, could well have been used by any writer who wanted to cite a range of opinions on a particular subject.

(6) *Paolo Beni*

The writings of Gianfrancesco were also known and discussed by another Italian contemporary of Bernardi, Paolo Beni (ca. 1552–1625).⁴⁹ Born in Crete, but moved to Gubbio young enough to be called *Eugubinus*, Beni taught theology at Perugia, philosophy at Rome, and literature at Padua. Of his philosophical works, perhaps most important is his long commentary on Plato's *Timaeus*.⁵⁰ In the preface to this work, Beni discusses the various aspects of the controversy between the Aristotelians and Platonists that had taken place in the fifteenth and sixteenth centuries, astutely summing up the situation at the time the *In Platonis Timaeum* was written.⁵¹ Among other things, Beni mentions the *Examen Vanitatis* as spurning Peripatetic philosophy,⁵² but also signals the key

⁴³ *Ibid.*, III, fols. 54^{vb}–55^{ra}; 21 entries.

⁴⁴ *Ibid.*, III, fols. 184^{vb}–185^{ra}; 11 entries.

⁴⁵ *Ibid.*, III, fols. 133^{va}–133^{vb}; 4 entries.

⁴⁶ *Ibid.*, III, fols. 289^{ra}, 290^{va}–290^{vb}, 291^{va}, 292^{rb}; 15 entries.

⁴⁷ *Ibid.*, III, fol. 285^{ra}; 2 of 3 entries cited.

⁴⁸ *Ibid.*, III, fols. 318^{rv}–319^{rb}; 8 entries.

⁴⁹ For a general discussion of Beni's life and works see Mazzuchelli, *op. cit.*, II, pp. 842–49.

⁵⁰ *Pauli Beni Eugubini . . . In Platonis Timaeum sive in naturalem omnem atque divinam Platonis et Aristotelis philosophiam decades tres* (Rome, 1594). This work was reprinted in 1605 and 1624.

⁵¹ *Ibid.*, pp. 3–6.

⁵² *Ibid.*, p. 3.

passage where Gianfrancesco turns aside from his uncle's attempt at a *pax philosophica*.⁵³ In the first book, moreover, he cites the younger Pico, along with Francesco Patrizi, as accumulating many examples of confusion and doubt of authenticity regarding the Aristotelian *corpus*.⁵⁴ The reference here is to the same Fourth Book of the *Examen Vanitatis* to which Nizolio had referred his readers. Beni and Nizolio, however, show different attitudes toward Aristotle, and, consequently, also different attitudes toward Pico. Whereas Nizolio might almost be considered to be a "professional anti-Aristotelian," Beni was more favorably disposed toward Aristotle and the scholasticism which developed from the tradition he initiated.

(7) *The Coimbra Commentaries*

In the last decade of the sixteenth and in the first few years of the next century appeared the influential and widely used *Commentarii Coimbricenses*, prepared by the Jesuits of the University of Coimbra as texts for their courses in Aristotelian philosophy. Almost immediately, these long and detailed commentaries on the Aristotelian writings spread into use throughout Europe and were reprinted numerous times within the next half century.⁵⁵ This series of textbooks is literally filled with citations from the multitude of earlier commentators on Aristotle. In addition to quotations from the usual ancient and medieval authors, one finds frequent references to sixteenth-century philosophical writers. Included in the latter are a surprising number of references to Gianfrancesco Pico. It is interesting to see here the extent to which is thought had penetrated even into Portugal by the end of the century. Furthermore, it is interesting to note how the authors of the *Commentaries* characterized him. Pico was not a run-of-the-mill Christian philosopher. That he was a fervent religious believer there is no doubt. At the same time, however, he was a relentless foe of Aristotelianism, the very

⁵³ *Ibid.*, p. 4; see above chap. II, pp. 47-48.

⁵⁴ "Nisi tamen quae de Aristotelicorum librorum iactura, confusione, ac varietate ab Andronico et Strabone (ne antiquiorum suspiciones attingam) sunt dubitationes excitatae a Plutarcho, Athenaeo, Adrasto et Magentio repetitae; ab Olympiodoro, Ammonio, Philopono, et Simplicio auctae; ab aliis denique multis, praesertim vero a Iohanne [marginal note: Pic. 1. 4 de vanit. gent.] Francisco Pico et Francisco Patritio [marginal note: Patr. in disc. Perip.] altius exaggeratae . . ." *Ibid.*, p. 28. See our discussion above, pp. 63-67.

⁵⁵ The various commentaries appeared first in print between 1592 and 1606 at Coimbra. Later printings were for the most part at Cologne and Lyon. For the printing history of the *Commentarii* see Carlos Sommervogel, S. J., *Bibliothèque de la Compagnie de Jésus*, Nouvelle édition (Brussels-Paris, 1890-1932) II, pp. 1273-78; IX, pp. 62-63. A comprehensive analysis of the Commentaries and a careful evaluation of their influence on seventeenth century intellectual life still remains a major desideratum. For some indications see Étienne Gilson, *Études sur le rôle de la pensée médiévale dans la formation du système cartésien* (Paris, 1951).

Aristotelianism which formed the basis of the Coimbra philosophical curriculum.

In the commentary on the logical writings of Aristotle, there are several references to Pico, but none refer to his substantial and quite serious attack on the *Posterior Analytics*, a criticism already recognized and opposed by Giulio Castellani at the middle of the century. Here, rather, are two somewhat feeble references to the same Book IV of the *Examen Vanitatis*, cited by Nizolio and others. The *prooemium* to the commentary on the *Categories* raises a doubt whether the work is genuine. Gianfrancesco Pico, whose opinion about the peculiar language of the work is referred to, is mentioned as one of those who had been dubious of the authenticity of the *Categories*.⁵⁶ Likewise, Pico's doubt regarding the authenticity of the *Prior Analytics* is referred to in the preface to the Coimbra edition of that work.⁵⁷

In other books of the *Commentarii* an interesting transformation takes place. Rather than being cited as an anti-Aristotelian or sceptic, Gianfrancesco turns out to be an important source for the history of philosophy.⁵⁸ His *Examen Vanitatis* is cited often, both in the text and in the copious marginal notes of the *Commentaries*, as a background source for the various philosophical disputes which are discussed. For example, in the commentary on the *Physics*, the appropriate chapter of the *Examen Vanitatis* (VI, 4) is cited as a source for information on the various opinions that have been held on the nature of place (*locus*).⁵⁹ Again, when the subject of vacuum is discussed, Pico's work (III, 12; VI, 5) is mentioned as presenting the position of those who hold that a vacuum is possible.⁶⁰ Again, in the commentary on the *De Coelo* and on the *Meteorology*, Gianfrancesco's long chapter on astronomical and meteorological matters is referred to in several different contexts, particularly as a source for various opinions on the different questions.⁶¹ Pico's own

⁵⁶ *Commentarii Collegii Conimbricensis e societate Jesu: In Universam Dialecticam Aristotelis Stagiritae* (Cologne, 1630) I, p. 297. Cf. *Ex. Van.* IV, 7; p. 677.

⁵⁷ *Ibid.*, II, p. 236; cf. *Ex. Van.* IV, 4; pp. 670-71: "Refert hoc libro Philoponus ut Mirandula libro 4 de examine vanitatis capite 4: quadringenta libros analyticos sub nomine Aristotelis fuisse olim inventos in bibliotheca Philadelphi Ptolomaei regis Aegypti."

⁵⁸ Pico is also mentioned in a similar way several times by the Jesuit Antonio Possevino (1533-1611) and by the Paduan philosopher Fortunio Liceto (1577-1657). Cf. *Antonii Possevini . . . Bibliotheca selecta . . .* (Cologne, 1697), I, p. 53; II, pp. 7, 17, 50 and Fortunio Liceto, *De animarum rationalium immortalitate libri quatuor* (Padua, 1629), p. 191. I am indebted to Prof. Edward P. Mahoney of Duke University for calling my attention to the latter reference.

⁵⁹ *Commentarii . . . in octo libros physicorum* (Cologne, 1630) II, p. 30.

⁶⁰ *Ibid.*, II, p. 78. Similar examples may be found at I, pp. 17, 315; II, pp. 127, 129, 312, 376. Also see *Commentarii . . . in tres libros de anima* (Cologne, 1629), pp. 120, 209.

⁶¹ *Commentarii . . . in quatuor libros de coelo, meteorologica et parva naturalia* (Cologne, 1631) I, p. 268; II, pp. 33, 43, 49, 83, 115, 121. Pico is also cited concerning other points at I, pp. 195, 244. Cf. *Ex. Van.* I, 12; pp. 504-10.

philosophical opinion is also mentioned in several places, for example, regarding his contention that all things come from a single source.⁶²

We see, therefore, that Pico's opinion was given some consideration even by the conservative branch of the Aristotelian-Scholastic tradition. This is of some significance, for even a casual reading of the Aristotelian commentaries of the period reveals a singularly reluctant disposition to quote authors of other than the school tradition: and it is not often that the more recent of these are given serious consideration. For the most part, the Aristotelian commentary had changed remarkably little over a period of several centuries, when contrasted with the philosophical water that had passed under the bridge since the beginning of the humanist criticisms of the schools. This is not to say that there were no changes in school philosophy, for there were and they were important. On the other hand, the continuation of the school philosophy was rather remarkable and it was much more traditionally oriented – both in form and in content – than the other philosophical movements that emerged in the course of the fifteenth and sixteenth centuries.

(8) *Filippo Fabri*

For this reason it is all the more surprising to find the works of Gianfrancesco Pico taken cognizance of by a man like Filippo Fabri (1564–1630) of Faenza.⁶³ A Franciscan and ardent Scotist, Fabri taught at several universities in northern Italy, notably at Padua. Among his works is a posthumously published commentary on Aristotle's *Metaphysics*.⁶⁴ One of the first things that Fabri takes up in his exposition and commentary is a discussion of various objections which have been advanced against Aristotelian metaphysics.⁶⁵ He divides those who reject metaphysics into three classes: (1.) those who say that metaphysics is of no use, (2.) those who disagree with Aristotle's presentation of the science, and (3.) those who contend that Aristotle's *Metaphysics* contains many false doctrines.⁶⁶ It is into the third category that he places Gianfrancesco Pico.

Under the third heading rise up the Academics and defenders of ancient philosophers, like Gianfrancesco Pico, in his book *Examen vanitatis doctrinae*

⁶² *Commentarii . . . in octo libros physicorum* I, p. 175.

⁶³ On Fabri see Joannes Hyacinth Sbaralea, *Supplementum et castigatio ad scriptores trium ordinum Sancti Francisci a Waddingo, aliusve descriptos . . .* (Rome, 1921), new ed., II, pp. 378–79; *Dict. de théol. cath.* V, cols. 2060–61; Montanari, *op. cit.*, I, II, pp. 68–72.

⁶⁴ *Philippi Fabri Faventini . . . Expositiones et disputationes in XII libros Aristotelis Metaphysicorum; quibus doctrina Ioannis Duns Scoti magna cum facilitate illustratur et contra adversarios omnes tam veteres, quam recentiores defenditur . . .* (Venice, 1637).

⁶⁵ *Ibid.*, pp. 10–12; "Obiectio adversariorum Aristotelis contra scientiam metaphysicæ."

⁶⁶ *Ibid.*, p. 10a.

gentium, finally Patrizi, here and there in his works, and others [who hold] that Aristotle was in these books both unjust and false – unjust, since he many times attributed opinions to ancient philosophers, which they themselves did not dream of; false, because his assertions and teaching in those books about the highest things are in many ways false.⁶⁷

Fabri cites several examples from Pico's works to back up his charge. Although Pico's arguments against Aristotle are nowhere given the same attention by Fabri as are those of philosophers more closely connected to the school tradition, it is nevertheless rather interesting to see that he knows of them. It is also not without significance that Pico is here coupled with Patrizi, as he had been by Beni.

(9) *Pierre Gassendi*

About the same time as Fabri was lecturing on the *Metaphysics* in Italy, a young French teacher was looking at Aristotelian philosophy in a much different way at Aix-en-Provence. This man was to hold a central position in many of the scientific and philosophical controversies of the first half of the seventeenth century. His name was Pierre Gassendi (1592–1655). From his early work at Aix in the years 1616–22, Gassendi worked out an extensive critique of the philosophy of Aristotle, using a sceptical approach similar to that employed by Gianfrancesco Pico.⁶⁸ Although Gassendi announced seven books of this work against Aristotle, only two of them ever appeared; and, only one of these was printed during his lifetime.⁶⁹ What did appear of this work,

⁶⁷ "Ex tertio capite insurgunt Academici et antiquorum philosophorum defensores, ut Ioannes Franciscus Picus libro Examinis Vanitatis doctrinae gentium, ultimo Particius, passim in suis operibus, et alii, quod Aristoteles in his libris et iniquus et falsus fuerit. Iniquus, quia ut plurimum antiquis philosophis opiniones ascripserit, quas nec ipsi somniarunt. Falsus, quia eius asserta et doctrina in his libris de rebus altissimis est ut plurimum falsa." *Ibid.*, p. 11b.

⁶⁸ Gassendi has not been studied as much in the past, perhaps, as he deserves; and, to a large extent, the earlier studies have been concerned primarily with his "Epicureanism". In the last several decades, however, greater attention has been paid to the man in general and to his anti-Aristotelian polemic and his scientific work in particular. Of the earlier scholarship in this connection, still valuable is the pioneering study of Henri Berr, *An jure inter Scepticos Gassendus numeratus fuerit* (Paris, 1898) (This work has recently appeared in a French translation, *Du Scepticisme de Gassendi* (Paris, 1960)). Among recent studies should be mentioned the work of Bernard Rochot, especially his edition of the *Exercitationes*, published as Pierre Gassendi, *Dissertations en forme de paradoxes contre les Aristotéliens* (Paris, 1959) with a French translation and an important introduction; the various contributions in the *Centre international de synthèse* publication, *Pierre Gassendi (1592–1655) sa vie et son oeuvre* (Paris, 1955) by Berr, Rochot, A. Koyré et al. are important. Most recent and most detailed with respect to Gassendi's "scepticism" is Tullio Gregory, *Scetticismo ed empirismo, studio su Gassendi* (Bari, 1961) with ample bibliography and a survey of earlier scholarship. See also Popkin, *op. cit.*, pp. 99–111, 142–48 and *passim*.

⁶⁹ The first book appeared as *Exercitationes paradoxicae adversus Aristoteleos* (Grenoble, 1624) and was reprinted separately in 1649 and 1656. The second book appeared separately in 1659, although both had been printed together already in the *Opera* of 1658 (Lyon). They

the *Exercitationes paradoxicae adversus Aristoteleos*, sums up the various threads of the rising disenchantment with Aristotle that had been growing in the course of the past two centuries. In it we can see the elements of Charron's scepticism, Vives' and Ramus' humanistic criticism, and Patrizi's critique of natural philosophy. But, perhaps more than any of these, we find a bright reflection of Gianfrancesco Pico's criticisms which had been leveled at Peripatetic philosophy a century earlier. Much in the same way as Gianfrancesco had collected the disparate currents of fifteenth century anti-Aristotelianism – those of Pletho, Bruni, Valla, Cusanus, and Hasdai Crescas – and combined them with the ancient sceptical critique in his *Examen Vanitatis*, Gassendi summarized the same movement a century later in his *Exercitationes*. Although certain connections between the two works have been noted previously,⁷⁰ their proximity to one another in both language and thought is perhaps more remarkable than has been hitherto realized, and we shall briefly consider it here.

Gianfrancesco is mentioned only twice in the *Exercitationes*.⁷¹ One of these references to Pico clearly indicates to us, however, the extent to which Gassendi was indebted to him. It occurs in the Preface, where Gassendi speaks of those by whom he had been influenced:

Nevertheless the deadly arrow of general prejudice persisted, in which I saw that all of the [religious] orders approved of Aristotle. However, the reading of *Vives* and of my *Charron* gave me courage and removed all fear, from which it seems I do not unjustly suspect that that sect is not to be completely approved because it is approved by almost all. But my powers have been further increased from *Ramus* especially and the *Mirandulan*. I mention these because I have always publicly declared those through whom I have progressed.⁷²

Although this reference to "the *Mirandulan*" could possibly refer to someone other than Gianfrancesco Pico,⁷³ the intellectual compati-

were again printed together in the *Opera* of 1727 (Florence). For further details of the printing history see Pierre Gassendi, *Dissertations* . . . , p. vii. For a list of the titles of the proposed seven books of the work see the introduction to Book I in *Petri Gassendi . . . opera omnia* (Lyon, 1658), III, p. 102.

⁷⁰ Gregory, *op. cit.*, pp. 24–25, 33, 40–41.

⁷¹ Gassendi, *Opera*, III, pp. 99, 142a.

⁷² "Haerebat tamen lethalis arundo generalis praeiudicii, quo videbam ordines omnes probare Aristotelem. Verum mihi animos adiecit timoremque omnem depulit et *Vivis* et mei *Charronii* lectio, ex qua visus sum non iniuria suspicari sectam illam non esse penitus probandam, quod probaretur quam plurimis. Sed et vires accrevire ex *Ramo* praesertim ac *Mirandulano*. Quorum idcirco mentionem facio, quod ingenuum semper duxerim profiteri per quos profecissem." *Ibid.*, p. 99.

⁷³ Besides his uncle Giovanni Pico della Mirandola (1463–94) there was also a professor

lity of the two seems clear enough. The actual extent to which Gassendi is indebted to Pico becomes more apparent when we closely compare their writings against Aristotle.

From the range of subjects covered by the two authors we see the close connection between them. By taking just a few examples, we can see that Gassendi's critique of Aristotle was fashioned at least partially after Pico's model. Both devoted chapters of their respective works to the following topics: (1) the uncertain legitimacy of the *Corpus Aristotelicum*, (2) The ambiguity of Aristotle's style, (3) Aristotle's own lack of certainty, and (4) the uncertainty of Aristotle's teachings as indicated by the constant disagreement among his followers.⁷⁴ Other examples abound. In the attack on Aristotelian science, Pico says, "Quod doctrina Aristotelis in examine appensa, plus inanis, quam veri ponderis prae se ferat. . . ." ⁷⁵ Gassendi puts it as follows, ". . . quia scilicet examinantes omnia huius scientiae Aristotelicae fundamenta experimur nulla esse solida." ⁷⁶ Or further, when Gassendi announced in the preface to the first book of the *Exercitationes* the titles of the other books that were to follow, one of the books was to be an attack on Aristotelian physics. The topics which Gassendi planned to treat in that book are precisely those treated by Gianfrancesco Pico in the first seven chapters of Book VI of the *Examen Vanitatis*: motion, place, time, and vacuum.

These evidences, combined with Gassendi's specific reference to Gianfrancesco as one to whom he was indebted, make it quite evident that he knew the *Examen Vanitatis* well and relied on it heavily at the time when he was composing his own work. There are whole sections of Gassendi's work which, while not copied from Gianfrancesco, certainly make few points which Pico had not made a century earlier. In

of philosophy at Bologna in the middle of the sixteenth century whose name was Antonio Bernardi della Mirandola (1503-65). This man is often referred to as *Mirandulanus*.

⁷⁴ The following chapter headings are from Book IV of Pico's work and Exercitatio IV of Book I of Gassendi's work:

(1) *Gassendi*: art. 1 - Incertum est extetne liber Aristotelis ex dubitatione ipsa Aristoteleo- rum circa eos qui habentur.

Pico: chap. 4 - Probat multiplicitate incertum esse, an ullum habeamus librum cuius exemplaria fuerint ab Aristotele composita.

(2) *Gassendi*: art. 6 - Sint ipsius omnia: incertitudo tamen est ex stylo truncato et ambiguo.

Pico: chap. 7 - Incertam esse Aristotelis doctrinam ex modo scribendi ipsius.

(3) *Gassendi*: art. 9 - Quin et saepenumero ab Aristotele ipso incertitudo proditur.

Pico: chap. 13 - Quod ipsemet Aristoteles fatetur sui ipsius doctrinam incertam esse.

(4) *Gassendi*: art. 10 - Haec praetereantur: ac incertitudo restat ex perpetuis Aristoteleo- rum dissidiis.

Pico: chap. 8 - Doctrinam Aristotelis incertam ostendi, ex ipsius asseclarum exposi- torumque perpetua pugna: quae quam multiplex sit, et quam magna ostenditur.

⁷⁵ *Ex. Van.* IV, 1; p. 660.

⁷⁶ *Gassendi. Opera*, III, 206a.

fact it is difficult to find a paragraph of the *Exercitationes* which does not immediately invite comparison with a very similar passage in the *Examen Vanitatis*.

Whereas the *Examen Vanitatis* was Pico's mature philosophical expression, the *Exercitationes* is but the beginning of Gassendi's. It was merely the springboard from which he launched his own fruitful philosophical and scientific career. After expressing a highly sceptical attitude early, he "mitigated" it, as Popkin says,⁷⁷ and developed a rather effective empirical approach to knowledge. The mature formulation of his thought is to be found in the *Syntagma*, which, as we have already noted, retained certain ties with various philosophical traditions. At the same time, however, it expressed a view of physical reality which was grounded in intelligent observational experience. Pico cannot claim to have inspired this aspect of Gassendi's thought, but the *Examen Vanitatis* did nevertheless provide a starting point from which the somewhat stagnant Aristotelian tradition of natural philosophy could be superseded by a new approach to problems of physics, an approach which was rooted in the data of experience.

We might say that Gassendi was the first to recognize the full philosophical significance of Pico's sceptical critique of the Peripatetics. It is most important to note, however, the differences in his use of Pyrrhonic criticism. The entire emphasis of Pico's endeavor was on questioning the reliability of knowledge derived within the framework of Aristotelian philosophy. In doing so, Pico attained a position that comes remarkably close to both that Justin Martyr (or pseudo-Justin), whom he translated; and of Nicolaus Cusanus, whom he took more seriously than anyone in Italy up to his time. In Gassendi, there is a decided change in outlook. The sharp criticism of Aristotle is still there, but not the strong emphasis on its role in safeguarding the Christian faith which we find in Pico. Rather, there is a greater emphasis on the evolution and validation of knowledge, an emphasis that had increasingly begun to characterize both the scientific and philosophical endeavor in the century after the publication of Pico's work.⁷⁸ For a continuation of Pico's rather pietistic brand of religion we must look elsewhere.

(10) Tommaso Campanella

A slight echo of it appears in Gassendi's contemporary, Tommaso Campanella (1568-1639). Much of Campanella's later life was devoted

⁷⁷ *Op. cit.*, pp. 142-48.

⁷⁸ The similarities and differences in the attitudes of the two men are discussed by Gregory, *op. cit.*, pp. 121-25.

to apologetics in behalf of Catholicism. One of his smaller, and not too widely known, writings of this type is the *De gentilismo non retinendo* (1636), a work of some importance in the history of anti-Aristotelianism during the Renaissance.⁷⁹ This book, although written a century after the *Examen Vanitatis*, is perhaps its closest intellectual heir. Campanella's polemic against Aristotle has the same tone as Pico's. Here is the same attempt to show the vanity of profane learning and the same return to the emphasis of the Fathers, whose philosophy, as one of them put it, was Christianity.⁸⁰ This latter emphasis is even more pronounced than it had been in Pico. In Campanella, there is not the same involvement in argument with individual philosophical doctrines (at least in the *De gentilismo non retinendo*), which we found in Pico's work and which had been developed further by Gassendi. Nor is there the humanistic concern which had moved Nizolio. Rather, the aspect of Pico's thought which emphasized the vanity of profane knowledge with its overtones of not only the Fathers and Cusanus, but of Savonarola as well, is here taken up anew. Augustine, Ambrose, Basil, Clement, Jerome, Justin, Origen, and Tertullian are the authorities upon whom Campanella draws.⁸¹ Gianfrancesco Pico is mentioned but once, and not in a particularly important context. This single reference does show that his name was known to Campanella and the similarity of the outlook of the two is readily apparent. The single criticism of Aristotle which Campanella takes from Pico and credits to him deals with the obscurity of the Aristotelian style. He says, in listing those who have rejected one or more things about Aristotle:

Francesco Pico [rejected Aristotle], for he is replete with subtle and tedious verbosity, lacking in necessary things, and abounding in worthless ones, and is like the sepia fish, fleeing various difficulties and hiding by means of his ink.⁸²

⁷⁹ The work seems to have been written in 1609–10, but was not printed until 1636 at Paris. It was reprinted in 1693. For further details see Firpo, *Bibliografia degli scritti di T. C.* (Turin, 1940), pp. 110–11. There is a large literature on Campanella, but, as many of his writings are only now appearing in print, the last word has not yet been said. We would like to mention the recent Italian translation of the *De Gentilismo* with an introduction and useful notes in Tommaso Campanella, *Della necessità di una filosofia cristiana*, trans. Romano Amerio (Turin, 1953). It is interesting to note that, although the name of Aristotle does not appear in the title of the work, Campanella cites it in a letter as *De Gentilismo Praesertim Aristotelico non Retinendo*. See Tommaso Campanella, *Lettere*, ed. Vincenzo Spampinato (Bari, 1927), p. 336.

⁸⁰ Tertullian, who said, "Nobis curiositate opus non est post Christum Iesum nec inquisitione post evangelium. Cum credimus nihil desideramus ultra credere. Hoc enim prius credimus non esse quod ultra credere debeamus." *De Praescriptione Haereticorum* in *Corpus Christianorum Series Latina, Tertulliani Opera Pars I* (Turnhout, 1954), I, p. 193.

⁸¹ Instructive regarding the sources for this work is the index of names given in Amerio's edition, pp. 93–95.

⁸² "Franciscus Picus, quoniam [sc. Aristoteles] est plenus subtili verbositate et taediosa,

(11) *Martin Schoock*

About the middle of the century, brief consideration is still given to Gianfrancesco Pico by Martin Schoock (1614–ca. 1665).⁸³ In his work *De Scepticismo*,⁸⁴ which traces the history of the sceptical movement and considers various aspects of scepticism, Pico is mentioned several times. Schoock's attitude toward Gianfrancesco is somewhat ambivalent. He doesn't quite know whether to praise or censure him. In the historical part of the work, Pico is commended for rising up and speaking out against the sceptics in the *Examen Vanitatis*.⁸⁵ Later in the *De Scepticismo*, however, Pico is mentioned as one of those who does not have confidence in sense knowledge. "Otherwise a fine man," Schoock says of Pico, but he cannot approve of Gianfrancesco's attack on Aristotle which used the sceptical arguments against the reliability of sense knowledge.⁸⁶

(12) *Leibniz*

Less than two decades after the publication of Schoock's work, when Leibniz brought out his edition of Nizolio's *De Veris Principiis*, he briefly mentioned Gianfrancesco Pico in the *Preface*.⁸⁷ Here, Leibniz sums up

in necessariis deficiens, et in futilibus abundans, difficultates varias instar piscis sepie fugiens, atramentoque obnubilans." *Ad Doctorem Gentium Thomae Campanellae Stylenis Ordinis Praedicatorum De Gentilismo non Retinendo* . . . (Paris, 1636), p. 24. This reference is signaled by Thorndike (*op. cit.*, VI, p. 467), who, however, misinterprets the passage, translating it to mean that Campanella had called Pico, rather than Aristotle, a *sepie*. As true as this may be, Campanella did not here say so, although the passage out of context is ambiguous. It is correctly translated by Amerio (*op. cit.*, p. 38). The text referred to in Gianfrancesco's writings is to be found in *Ex. Van.* IV, 7; p. 677. See above chap. III, pp. 69–73 and Charles B. Schmitt, "Aristotle as Cuttlefish," *Studies in the Renaissance*, XII (1965), pp. 60–72. The similarity between Pico and Campanella has also been recognized by Giovanni di Napoli, *L'immortalità dell'anima nel Rinascimento* (Turin, 1963), pp. 413–14.

⁸³ On Schoock's relation to scepticism and for further bibliography see Popkin, *op. cit.*, pp. 200–201 and Paul Dibon, *La philosophie néerlandaise au siècle d'or* (Paris, 1954f.), I, pp. 180–88.

⁸⁴ The full title is *Martini Schoockii de scepticismo pars prior sive libri quatuor: quibus, quam antiquorum, quam recentiorum scepticorum deliria, ex suis principiis solide discutuntur, atque certitudo non minus disciplinarum universalium quam philosophiae theoreticae asseritur* (Groningen, 1652), pp. 473.

⁸⁵ "Ex recentioribus multi quidem pro re nata in Scepticos insurrexere, (inter quos praecipuus est Franciscus Picus Mirandulae Comes in eximio opere de vanitate doctrinae gentium) nulli autem plane omnia, quae de iis, atque eorum qualibuscunque dogmatis (si modo ita vocari debeant) dici possent, proponere instituerunt." *Ibid.*, p. 76.

⁸⁶ "Ex recentioribus in eadem sententia fuit vir alias summus Franciscus Picus Mirandulanus; libro enim 4 de vanitate doctrinae gentium capite 12 perstringit Aristotelicam physiologiam, quod in sensu fundetur ac ex eo originem trahat. 'Cum,' inquit, 'Aristotelis doctrina fundatur in sensu, ideo facile vincitur incerta: quia non incertus modo ut plurimum, sed saepenumero fallax, et pluribus modis aliis, quam putaverat Aristoteles, et decipere potest et decipit.'" *Ibid.*, p. 181. The quotation is taken with minor modifications from *Ex. Van.* IV, 12; p. 687, the first sentence.

⁸⁷ The title is "Dissertatio praeliminaris, de alienorum operum editione, de scopo operis de philosophica dictione, de lapsibus Nizolii". *ed. cit.*, fols a3^r–f^r.

the philosophical history of the past two centuries so well that it can still today be read with profit by the historian of philosophy. Besides being mentioned as one of those who has criticized Aristotle's logic,⁸⁸ Gianfrancesco Pico is cited as one of the first critics of the *Corpus Aristotelicum*.⁸⁹ These citations indicate that Pico was still thought of as an early critic of Aristotle at the time of Leibniz in the second half of the seventeenth century.

With Leibniz, we shall end our summary of the influence of the *Examen Vanitatis*. The date of 1670 in which Leibniz's edition appeared marks a century and a half from the date of the first publication of Pico's work and is a good terminal point for our study. The results has been that, although Gianfrancesco Pico della Mirandola was not one of the most influential thinkers of the sixteenth and seventeenth centuries, nevertheless, there were philosophers who wrote in one way or another about his work, and several at least were of more than secondary importance. If his influence as a source of sceptical ideas was not immediate, its latent power still could not be neglected in the seventeenth century; if his anti-Aristotelian polemic did not have the striking originality of Bruno's or Galileo's, he did summarize, perhaps better than anyone before Patrizi, the increasing body of arguments critical of the Aristotelian tradition. It was not mere whim that led Gassendi to utilize the *Examen Vanitatis* to the extent he did. The work was a century old, its author did not know the criticisms of Nizolio, Ramus, Bruno, Patrizi, or Charron. If some of Pico's criticisms were weak, the sheer bulk of their number and the variety of the sources from which they were drawn was sure to make an impression on a man like Gassendi, who was planning an exhaustive work against the Aristotelians. It is in this way, then, as the best general summary of the critique of Aristotelianism available at the time, that we must consider the *Examen Vanitatis*. Capable of, and given, many interpretations by thinkers of a wide range of persuasions, its lasting importance as a historical document is to be found in the role it had in the general turning away from Aristotle in the course of the century and a half after its publication.

⁸⁸ *Ibid.*, fol. d₃^v.

⁸⁹ "Mihi genuitatem operum Aristoteleorum, quicquid dicant Johannes Franciscus Picus in Examine Vanitatis doctrinae gentium, quicquid Nizolius, quicquid Petrus Ramus, quicquid Patricius, quicquid in Apologia magnorum virorum Magiae suspectorum, ubi et hunc Nizolii librum citat, Naudaeus . . ." *Ibid.*, fol. c₃^v.

APPENDIX A

THE WORKS OF GIANFRANCESCO PICO
THE MANUSCRIPTS AND PRINTED EDITIONS
WHERE THESE MAY BE FOUND,
AND THE SECONDARY LITERATURE
WHICH REFERS TO HIM

LIST OF ABBREVIATIONS USED IN THIS APPENDIX

(A) REFERENCE WORKS

- | | |
|------------|--|
| H | L. Hain, <i>Repertorium Bibliographicum</i> . . . (Stuttgart, 1826-38). |
| C | W. A. Copinger, <i>Supplement to Hain's Repertorium Bibliographicum</i> (London, 1895-1902). |
| R | D. Reichling, <i>Appendices ad Hainii-Copingeri Repertorium Bibliographicum</i> (Munich, 1905-14). |
| GKW | <i>Gesamtkatalog der Wiegendrucke</i> (Leipzig, 1925 f.). |
| Opera | <i>Ioannis Francisci Pici Mirandulae . . . Opera quae extant omnia</i> (Basel, 1601). |
| Amedeo | Renzo Amedeo, <i>Operai nella vigna del Signore</i> (Carrù, 1962). |
| Brunet | Jacques-Charles Brunet, <i>Manual du Libraire</i> . . . (Paris, 1860-80). |
| Gibson | R. W. Gibson, <i>St. Thomas More: A Preliminary Bibliography of His Works to the Year 1750</i> (New Haven-London, 1961). |
| Graesse | J. G. T. Graesse, <i>Trésor de livres rares et précieux</i> (Dresden, 1859-69). |
| Inventari | <i>Inventari dei manoscritti delle biblioteche d'Italia</i> , 1890 f. |
| Kristeller | P. O. Kristeller, <i>Iter Italicum</i> (London-Leiden, 1963), vol. I. |
| Niceron | J. P. Nicéron, <i>Memoires pour servir à l'histoire des hommes illustres</i> . . . (Paris, 1729-45), vol. XXXIV, pp. 147-56 on Gianfrancesco Pico. |
| Panzer | G. W. Panzer, <i>Annales typographici</i> . . . (Nuremberg, 1793-1803). |
| Renouard | A. A. Renouard, <i>Annales de l'imprimerie des Alde</i> , 3rd ed., (Paris, 1834). |
| Ritter | Fr. Ritter, <i>Répertoire bibliographique des livres imprimés en Alsace au 16me siècle</i> (Strasbourg, 1935 f.). |
| Sander | Max Sander, <i>Le livre à figures italien depuis 1467 à 1530</i> (Milan, 1942). |
| Santangelo | Giorgio Santangelo (ed.), <i>Le epistole "De imitatione" di Gian-</i> |

- francesco Pico della Mirandola di Pietro Bembo* (Florence, 1954), the list of editions at pp. 20–23.
- Goff F. R. Goff, *Incunabula in American Libraries* (New York, 1964).
- Tiraboschi Girolamo Tiraboschi, *Biblioteca modenese* (Modena, 1781–86), IV, pp. 108–22 on Gianfrancesco Pico.

(B) LIBRARIES

European

- BM British Museum, London
- BN Bibliothèque nationale, Paris
- BBC Biblioteca Comunale, Bologna
- BBU Biblioteca Universitaria, Bologna
- FBM Biblioteca Marucelliana, Florence
- FBN Biblioteca Nazionale, Florence
- FBR Biblioteca Riccardiana, Florence
- FerBC Biblioteca Comunale, Ferrara
- MilA Biblioteca Ambrosiana, Milan
- MirB Biblioteca Comunale, Mirandola
- MunS Staatsbibliothek, Munich
- PBP Biblioteca Palatina, Parma
- PaM Bibliothèque Mazarine, Paris
- RBA Biblioteca Angelica, Rome
- RBV Biblioteca Vallicelliana, Rome
- VL Vatican Library, Vatican City

American

- CtY Yale University Library, New Haven
- ICN Newberry Library, Chicago
- ICU University of Chicago Library, Chicago
- IU University of Illinois Library, Urbana
- MH Harvard University Library, Cambridge
- NjP Princeton University Library, Princeton
- NML Morgan Library, New York
- NN New York Public Library, New York
- NNC Columbia University Library, New York
- NNUT Union Theological Seminary Library, New York

INTRODUCTION

The purpose of this appendix is to list the various writings of Gianfrancesco Pico, the printed editions and manuscripts where they may be found, and the principal secondary works which deal with the life and works of that author. By attempting to be as complete and accurate as possible I hope to make this appendix the basis of further studies on the thought of Gianfrancesco Pico. Materials dealing with Pico as a political figure have been omitted. There are several reasons for this. First, my present study focuses primarily upon him as a philosopher and scholar. Secondly, the amount of material that relates to him as a political figure is sufficient for a separate study in itself. Some indications have been given in the first chapter of my study, but there is an abundance of unstudied manuscripts material which is probably as extensive as the material which I have utilized.

The appendix is divided into four major sections. I shall say a few words about the aims and limits of each of these sections in turn. Before doing this, however, I shall briefly outline the principles which I have used in bringing together this appendix. Those editions and manuscripts which I have not been able to examine are preceded by an asterisk, and those which we have consulted by means of microfilm or photostat are preceded by an "F." Information contained in square brackets is *not* to be found in the editions themselves, but has been supplied from other sources (e.g. from the various studies of early typography). In the case of translations, the abbreviation "Tr." will be used, followed by I (Italian), E (English), or F (French).

I. *The Writings of Gianfrancesco Pico.* Here I shall try to give the complete title of the different works of the author, the date of composition where possible, the name of the person to whom each work was dedicated, and, by a system of cross-reference to Sections II and III, the various printed editions and manuscripts of the work which are known to exist. Where there are different versions of the same work or translations into other languages this is likewise noted. I also list Pico's "lost works," along with the information we have about them and references to them in Pico's own extant works. I have made no attempt to discuss individual letters, save in the cases where

they might be considered as works in themselves (as with the exchange with Pietro Bembo or the long letter written in defense of Dionysius the Areopagite). The manuscripts and printed editions, where each work can be found, are indicated by numbers which refer to Section IIA (in the case of printed editions) and Section III (in the case of manuscripts). The list of works is divided by subject matter and the arrangement is chronological within each of these divisions.

The most important single source of information concerning the date of composition of Pico's various works, both extant and lost, is the letter to Lilio Gregorio Giraldi. I have accepted the date of this letter as 1514, although there is a peculiarity with regard to it, which I feel should be mentioned. In the first printed edition (*De amore divino*, Rome, 1516, fols. 011^v–014^v) of the text we read that the letter was completed in 1514. At the end of the letter, the date January 25, 1516 is given. To further complicate the matter the same letter was published virtually unchanged (although some of the content was rearranged) in other editions of Pico's works (e.g. *Opera*, Basel, 1601, pp. 877–80) with the date of 1520 given in the text of the letter. From all of this conflicting information, I have decided to accept the earliest date, viz. 1514, as the date of composition. Hence, this is the basis of my dating a number of Pico's works.

II. *Printed Editions of Pico's Writings and of the Works Dedicated to Him*. This section will consist of three parts.

A. *Editions of Pico's Works*. Here I shall try to list every edition of all of Gianfrancesco Pico's writings, save the political correspondence and fugitive letters which are spread through various collections. I have made an attempt to add bibliographical references to these works where possible. I have usually followed the principle of giving two references to each edition, but in the case of incunabula I felt that a single reference is often adequate. I have also listed locations where the various editions can be found, limiting myself to the British Museum and Bibliothèque Nationale in the cases when a book is to be found in one of these two major libraries. In those instances in which there is no copy in either of these libraries, I have listed one or two libraries where the book may be found. I have tried to give the most accessible libraries in these cases, but occasionally I have had to refer to relatively small and out-of-the-way collections which happen to have a rare edition. In addition to this, I have given American locations, when they are known to me, although my own researches in this respect have been largely limited to the great East Coast libraries and Chicago; consequently, the American locations I give reflect this.

I list here only those editions which either I have inspected personally or for the existence of which I have found convincing evidence. Consequently, several editions listed in various bibliographical works have been omitted from my list. In most cases the "ghost editions" have proven to be the result

of simple confusions with legitimate printings. In only one case (Reichling 679) is there a persistent bibliographical tradition in behalf of a "ghost edition."¹ It is quite possible that I have overlooked one or another edition of one of Pico's works. It has proven to be especially difficult to run down all of the printings of those works which appeared often in anthologies. I have tried to be conservative in listing printed editions of questionable legitimacy, holding to the opinion that in matters of bibliography sins of omission are preferable to sins of commission.

By a system of cross-numbering, which refers to Section I, I indicate which of the author's works can be found in each of the editions listed. The list is chronological. In the cases where works of Pico are contained in anthologies and collections of more than one volume, the volume and page numbers, where the work is to be found, are given.

B. *Fugitive Letters*. Here I list editions where those letters, – both written by Gianfrancesco and addressed to him – which cannot be found in any of the editions listed in Part A of this section, are to be located. I make no attempt to be complete, but list only a single source where a particular letter is to be found. This section is arranged alphabetically by correspondent.

C. *Dedications*. Here I list the printed works of other authors which were dedicated to Gianfrancesco Pico. Again I do not attempt to be complete, but I list only the first printing of each work. Where this is not possible I list the edition which I have examined. This section is arranged alphabetically by author.

III. *Manuscripts Relating to Gianfrancesco Pico*.² Here I list the most important manuscripts which relate to Gianfrancesco Pico as a philosopher and scholar. Again I, omit those of his political correspondence and those of predominantly political interest. Include are: (1) all manuscripts which contain writings by Pico himself, even though these may have been made later than the printed editions of the material they contain; (2) unpublished letters addressed to Gianfrancesco Pico; (3) any other unpublished documents, either addressed to him or discussing him and his activities in some way; and (4) other manuscripts which fall into none of these categories, but which are nevertheless important for the study of Gianfrancesco Pico. I have attempted in every case to give a brief description of the manuscript and some indication of its scope; I also indicate, where possible, the part of the manuscript which relates to Pico. Where possible I add a reference to where a description of the manuscript may be found. Those which are followed by the abbreviation "(POK)" have been indicated to us through the courtesy

¹ For the demonstration that Reichling 679 is a "ghost" that arose over two variants of the 1507 edition of the *Hymni heroici tres* see Charles B. Schmitt, "A Note on the First Edition of Gianfrancesco Pico's 'Hymni heroici tres,'" *Papers of the Bibliographical Society of America*, LIX (1965), pp. 45-48.

² I am presently preparing an edition of the unpublished works which should appear shortly.

of Professor Paul Oskar Kristeller of Columbia University; they will be more fully described in the later volumes of his *Iter Italicum*, only the first volume of which has appeared as I write this.

This list will be arranged alphabetically by city and library, both written in the form used in the country in question. If nothing is said concerning the language, it may be assumed that the manuscript is written in the original language of the work (which can be found by reference to Section I). Generally, only in the case of translations will the language be mentioned.

IV. *Selected Secondary Works.* Here I shall *not* list those works which are cited with regard to Pico in the study itself. This list merely contains a few additional items which I did not have occasion to cite previously. Some of these deal with matters peripheral to the focus of this book and others have been superseded by later, more authoritative studies of the same subject. My list is highly selective; I have made no attempt to be complete, for few of the older works are really valuable to the modern scholar. As an aid to the reader, I have briefly indicated the scope of each of the works listed here.

SECTION I

THE WRITINGS OF GIANFRANCESCO PICO

A. PHILOSOPHY

(1) *Defensio de ente et uno*

As the name implies this work was written in defense of Giovanni Pico's work *De uno et ente*. It was first printed in the 1496 edition of the elder Pico's *Opera*. It was completed by December, 1495, when Antonio Cittadino mentioned it in a letter to Gianfrancesco (*Opera*, p. 74). It was thereafter reprinted in the various editions of Giovanni Pico's works. The single known manuscript seems to be of later date.

Manuscript: 64

Printed editions: 1, 6, 9, 10, 11, 26, 29, 55, 56, 62, 63, 71, 72.

(2) *De studio divinae et humanae philosophiae, libri duo*

This work sets the foundation for the longer and more comprehensive treatment of the same subject in the later *Examen Vanitatis*. The first edition bears a dedication letter to Alberto Pio, dated December 24, 1496 and was printed the next year. The only extant manuscript is from the year 1513. Other references to this work by Pico are after the date of the first printed edition.

Manuscript: 63

Printed editions: 2, 8, 11, 39, 63, 72, 93.

(3) *De imaginatione, liber*

This work, which is based on Aristotle's discussion of imagination in the *De anima*, seems to have been completed about the end of the year 1500. The dedication letter to Emperor Maximilian is from December 1 of that year. Pico does not refer to it earlier than this and the first printed edition appeared in April of 1501. There are no known manuscripts, but it was printed several times in the sixteenth century and has been translated into French (by Jean-Antoine de Baif in 1557) and English (by Harry Caplan in 1930).

Manuscripts: none.

Printed editions: 7, 11, 45, 54 (Tr.F), 63, 65 (Tr.F), 69, 72, 106 (with Tr.E).

(4) *De rerum praenotione libri novem*

This is a lengthy work (second in length only to the *Examen Vanitatis* among Pico's works) against pretended modes of prophecy. It is of the same genre as Giovanni Pico's work against astrology and is dedicated to the author's cousin and protector, Alberto Pio. It was first printed in the *Opera* of 1506-07. It was already completed, however, several years before this, being mentioned in the letters to Zanobi Acciaiuoli of May 28, 1502 (*Opera*, p. 821) and to Reuchlin (p. 834), Zasius (p. 866), and Wolf (p. 864) from the year 1505. There is no substantial portion of the work extant in manuscript.

Manuscript: 6 (excerpts).

Printed editions: 11, 63, 72.

(5) *Liber de providentia Dei contra philosophastros*

This work was first printed in November, 1508, and does not seem to have been completed much before that date, for it was not included in the *Opera* of 1506-07. It was dedicated to Domenico Grimani.

Manuscripts: none.

Printed editions: 13, 15, 84.

(6) *Physici libri duo*. This consists of (A) *De appetitu primae materiae* and (B) *De elementis*

The first of these is dedicated to Cardinal Bernardo Dovizi of Bibbiena and is of uncertain date. It most probably was written after Pico's return to Mirandola in 1514. The dedication manuscript is extant, but gives no indication of the date. The *De elementis* is dedicated to Cardinal Matthew Lang in appreciation of his help in restoring Mirandola to Gianfrancesco. (It is dated 1513 in the printed editions). These works were first printed in 1518.

Manuscript: 77 (A only).

Printed editions: 27, 35, 63, 72.

(7) *De falsitate astrologiae genethliacorum confutatio*

This work, which is dedicated to Giovanni Manardo, is probably the same as the one which Gianfrancesco refers to as *Quaestio de triplici astrologia* (e.g. in *De causis calamitatum* . . . (1519 ed.), fols. Bv, F_{III}^v and in the letter to Giraldi of 1514, *Opera*, p. 880) or *De presensionibus genethliacis* (letter to Giraldi, p. 878). It was probably written sometime between 1505 and 1514.

Manuscript: 98.

Printed editions: none.

(8) *Liber de veris calamitatum causis nostrorum temporum*

This work was dedicated to Leo X and was first printed at Mirandola in 1519. It seems to have been written about 1515 (See 1860 ed., p. 21).

Manuscripts: none.

Printed editions: 28, 100.

- (9) *Examen vanitatis doctrinae gentium et veritatis Christianae disciplinae: Distinctum in libros sex, quorum tres omnem philosophorum sectam universim: reliqui Aristotelem et Aristoteleis armis particulatim impugnant: Ubique autem Christiana et asseritur, et celebratur disciplina*

This is the longest and most important work. It was dedicated to Leo X and first printed in 1520 at Mirandola. The precise date of composition of the work is uncertain. It was probably begun before Gianfrancesco's first exile from Mirandola in 1502, but was not completed until after his final return in 1514 (Opera, pp. 600-01). It is mentioned in the letter to Giraldis of 1514 (Opera, pp. 878-79).

Manuscripts: none.

Printed editions: 31, 63, 72.

- (10) *De animae immortalitate digressio*

This work seems to have been extracted from a larger commentary on Aristotle's *De anima*. It was first printed in 1523, but was already completed in 1514 as we know from the letter to Giraldis from that year (Opera, p. 879).

Manuscripts: none.

Printed editions: 34, 47, 48.

- (11) *De auro libri tres. Opus sane aurem in quo de auro tum aestimando, tum conficiendo, tum utendo ingeniose et docte disseritur*

This work is of doubtful authenticity. It was not printed until 1586 and no manuscript connecting it with Gianfrancesco Pico is known. It is considered to be a spurious work by Tiraboschi, Ceretti, and Thorndike. There is, at the same time, strong internal evidence (e.g. frequent mention of persons well-known to Gianfrancesco Pico and an acquaintance with Mirandola) that indicates that if the work is not genuine it is a very clever forgery.

Manuscript: 73 (book I only).

Printed editions: 67, 68, 70, 74, 81, 87, 92.

B. THEOLOGICAL AND RELIGIOUS WORKS

- (12) *De morte Christi et propria cogitanda, libri tres*

This is a religious work dedicated to Savonarola and seemingly written under the influence of the friar. It was completed by October 20, 1496, as we know from the dedication letter (Opera, p. 29) and a copy of the work was sent to Ercole Strozzi on November 12 of the same year (Opera, p. 855). It was first printed with the *De studio* in July of 1497.

Manuscripts: none.

Printed editions: 2, 8, 11, 39, 63, 72.

- (13) *Theoremata numero XXV de fide et ordine credendi*

This is a work of medium length, principally theological, but of some philosophical importance. It was dedicated to Pope Julius II in the first

printed edition of 1506-07. The date of composition seems to have been somewhat earlier. It was already mentioned in a letter to Ercole Strozzi from 1496 (Opera, p. 855), in a letter to Zanobi Acciaiuoli of 1502 (Opera, p. 821), and in letters of 1505 to Ulrich Zasius (Opera, p. 866) and Thomas Wolf (p. 864).

Manuscripts: none.

Printed editions: 11, 63, 72.

- (14) *Declaratio capitis in Christo Pater, et Christus in nobis, quod ex octavo de Trinitate libro Hilarii sumptum est et positum a Gratiano in decretis de consecutione, distinctio II*

This brief work was first printed in the edition of the *Opera* of 1506-07. It was dedicated to Cosmus Passetus and was completed by 1505, when it was mentioned in the letters to Wolf (Opera, p. 864) and Zasius (p. 866).

Manuscripts: none.

Printed editions: 11, 63, 72.

- (15) *De amore divino libri quattuor*

This work, which is dedicated to Pope Leo X, seems to have been finished in 1516, when it was first printed. There is also a de luxe dedication manuscript of the work.

Manuscript: 11.

Printed edition: 23.

- (16) *De reformandis moribus oratio*

This short oration was addressed to Pope Leo X and the assembled Lateran Council. A draft of the work was completed by September, 1514, when Pico showed it to Pirckheimer in Innsbruck (see *Willibald Pirckheimers Briefwechsel*, ed. E. Reicke (Munich, 1940 f.), II, 565), and it is mentioned in the letter to Giraldi of the same year (Opera, 879). It was first printed in 1520 and several times thereafter, particularly in Germany, indicating that it was used as propaganda for the cause of the Reformation.

Manuscript: 74.

Printed editions: 30, 33, 43, 72, 76, 79, 91, 98.

C. POLEMICAL WORKS

- (17) *Opusculum de sententia excommunicationis iniusta pro Hieronymi Savonarolae innocentia*

This work was first published in 1497 or 1498 after the excommunication of Savonarola and was dedicated to Ercole d'Este. There is also an Italian translation of the work which survives in manuscript.

Manuscripts: 33 (Tr.I, fragment), 59, 80 (Tr.I).

Printed editions: 3, 8, 32, 75, 82, 88.

- (18) *Defensio Hieronymi Savonarolae Ferrariensis adversus Samuelem Cassinensem*

This defense of Savonarola against the attack of Samuele Cascini (or Cas-

sini) seems to have been written in 1497 shortly after Cascini's attack. It is dedicated to Girolamo Tornelli. Manuscript Riccardiana 420 is said to be an autograph, but is undated.

Manuscripts: 38, 59, 69 (fragment).

Printed editions: 4, 8, 83.

(19) *Epistola in favore di Fra Hieronymo da Ferrara dappoi la sua captura*

This is an "open letter" directed to the people of Florence, printed as a pamphlet, and dated Easter Sunday, 1498. It was printed but once in an edition extant in very few copies (perhaps only two).

Manuscript: 23.

Printed edition: 5.

(20) *Operecta in defensione della opera di Piero Bernardo da Firenze servo di Jesu Cristo*

This work, dedicated to Domenico Benivieni, is dated September, 1501. It survives in a single manuscript which remained unpublished until 1943.

Manuscript: 22.

Printed edition: 108.

(21) *Pro asserendis a calumnia libris Dionysii Areopagitae . . . epistola*

This long letter in defense of Dionysius was printed as a separate work; it is of uncertain date, but was first printed in 1523. The manuscripts do not help in the dating. It is addressed to the Bishop of Chieti, Giampietro Carafa, the future Paul IV and a relative of Gianfrancesco's wife, who was bishop of that city from 1505 to 1524.

Manuscripts: 13, 90.

Printed editions: 33, 37.

(22) *Depulsoria calumniae romaniensis oratio*

This work, which is as yet unpublished, seems to have been written about 1524. See No. 57 below, however.

Manuscripts: 2, 57.

Printed editions: none.

D. BIOGRAPHIES

(23) *Vita Ioannis Pici Mirandulae*

The life of the uncle was written expressly for Gianfrancesco's 1496 edition of the *Opera*. Therefore, the date of composition must be placed in 1495 and 1496. It was reprinted often thereafter. An English translation was made about 1500 by Thomas More and was printed about 1510. There is also an Italian translation by Sorbelli (1963).

Manuscripts: 7 (fragment), 21, 46 (Tr.E).

Printed editions: 1, 6, 9, 10, 11, 16 (Tr.E), 17 (Tr.E), 26, 29, 44, 53 (Tr.E), 55, 56, 62, 72, 89, 104 (Tr.E), 107 (Tr.E), 110 (with Tr.I).

(24) *Vita Fratris Hieronymi Savonarolae Ferrariensis*

This work has the most complicated textual history of all of Pico's works. Gianfrancesco made several revisions of the work during his lifetime, only one of which has been printed. Although not printed until 1674, it apparently was very popular and widely read during the sixteenth and seventeenth centuries. There are approximately forty known manuscripts of the work and certainly others are to be found among the many unstudied documents relating to Savonarola. Besides the three different Latin redactions of the work, there are several different Italian translations, possibly a French translation, and at least one compendium based on it. Much additional study is needed regarding this work and its textual tradition.

Manuscripts: 1 (Tr. I), 3, 4 (Tr. I, compendium), 5 (Tr. I), 10 (Tr. I), 14 (fragment), 15 (Tr. I), 16 (Tr. I), 17, 18 (Tr. I), 19 (Tr. I, compendium), 24, 26, 28 (Tr. I), 29, 31, 32, 34 (Tr. I), 35 (Tr. I, fragment), 40, 41 (Tr. I), 42 (Tr. I), 43, 45 (Tr. I), 48 (Tr. I, abridged), 49 (Tr. I, compendium), 51, 52 (Tr. F?), 53, 58 (Tr. I), 65 (Tr. I), 66, 68 (Tr. I), 69 (Tr. I), 70, 71 (fragment), 78, 81, 82, 87, 89, 94, 99.

Printed editions: 88, 89.

(25) *Compendium rerum admirabilium coelicae virginis Catherinae Raconisiae de tertio habitu divi Dominici*

This work, apparently originally written in Latin, is better known in the Italian translation. There is a single Latin manuscript of the work, but there are several Italian manuscripts and three Italian printed editions. The work was completed in 1532, but additions were made after Pico's death by the Dominican Pietro Martire Morelli (in 1552). This Latin version with Morelli's additions (found in Torino ms. H.VI.10) was then printed in an Italian translation about 1681. Pico's original (without Morelli's additions) also exists in an Italian translation in several manuscripts. No copy of the Latin original without the additions of Morelli is known to exist.

Manuscripts: 27 (Tr. I), 39 (Tr. I), 50 (Tr. I), 72 (Tr. I), 79 (Tr. I), 83. Printed editions: 85 (Tr. I), 90 (Tr. I), 99 (Tr. I).

E. POETRY

(26) *Heroicum carmen de mysteriis dominicae crucis nuper in Germaniam delapsis, titulus staurostichos*

This religious poem, dedicated to Emperor Maximilian, was first printed in the *Opera* of 1506-07, but was completed by 1505 as we know from the letters to Reuchlin (*Opera*, p. 834), Wolf (p. 864), and Zasius (p. 866). The extant manuscript seems to have been made after the first printed edition.

Manuscript: 62.

Printed editions: 11, 18, 19, 63, 72, 73, 94.

(27) *Sylva votum pro salute coniugis*

This poem was first printed in the collection of 1507 and we have no evidence for its completion before that date.

Manuscripts: none.

Printed editions: 12, 18, 58, 59.

(28) *Hymnus ad Christum*

This, along with the two following items, makes up the *Hymni heroici tres*. They were first printed in 1507, but were already partially finished in the latter part of 1505, as we learn from the letter to Wolf (Opera, p. 865).

Manuscripts: none.

Printed editions: 12, 18, 22, 24, 25, 58, 59.

(29) *Hymnus ad Virginem*

See item No. 28.

Manuscript: 93.

Printed editions: 12, 18, 22, 24, 25, 58, 59.

(30) *Hymnus ad Sanctissimam Trinitatem*

See item No. 28.

Manuscripts: 62, 93.

Printed editions: 12, 18, 22, 24, 25, 58, 59.

(31) *Argumentum hymnorum carmine elegiaco*

This poem is included in the collection of 1507 and we have no evidence for its completion before that date.

Manuscripts: none.

Printed editions: 12, 18, 22, 24, 58, 59.

(32) *De expellendis venere et cupidine carmen heroicum*

This was first printed in 1513 and we have no evidence for its completion before that date.

Manuscripts: none.

Printed editions: 20, 21, 77, 95.

(33) *In D. Geminianum hymnus*

This was first printed in 1513 and we have no evidence for its completion before that date.

Manuscripts: none.

Printed editions: 21, 41.

(34) *In D. Laurentium Martyrem hymnus*

This work was first printed in 1513 and we have no evidence for its completion before that date.

Manuscripts: none.

Printed editions: 20, 21, 41, 95.

(35) *Ad S. Antonium hymnus*

This was first printed in 1520, but had been completed by 1514 as we know from the letter to Giraldis (Opera, p. 878).

Manuscripts: 20, 75, 98.

Printed editions: 30, 41.

(36) *Ad S. Mariam Magdalenam hymnus*

This was first printed in 1520, but had been completed by 1514 as we know from the letter to Giraldis (Opera, p. 878).

Manuscript: 75.

Printed editions: 30, 41.

(37) *Ad S. Martinum hymnus*

This poem was first printed in 1520 but had been completed by 1514 as we know from the letter to Giraldis (Opera, p. 878).

Manuscripts: 75, 98.

Printed editions: 30, 41.

(38) *Ad S. prophetam Davidem (or Danielelem) hymnus*

This poem was first printed in 1531, but had already been copied in the manuscript dated 1524. The manuscripts give the hymn as being directed to David, while the printed edition addresses it to Daniel. From the text, the former seems to be correct.

Manuscripts: 75, 98.

Printed edition: 41.

(39) *Ad SS. Ioannes Baptistam et Evangelistam hymnus*

This was completed by 1524 since it is included in the manuscript of that date. It was not printed until 1531.

Manuscripts: 75, 98.

Printed edition: 41.

(40) *In S. Paulum Apostolum Iesu Christi hymnus*

This was first printed in 1531, but had been completed by 1514 as we know from the letter to Giraldis (Opera, p. 878).

Manuscripts: 75, 98.

Printed editions: 41.

(41) *Ad S. Franciscum hymnus*

This poem was first printed in 1531, but was completed in 1514 when it was mentioned in the letter to Giraldis (Opera, p. 878).

Manuscripts: 75, 98.

Printed editions: 41.

(42) *Ad Angelum Custodem hymnus*

This was printed in 1531, but had already been completed by 1514 when it was mentioned in the letter to Giraldis (Opera, p. 878).

Manuscripts: 75, 98.

Printed edition: 41.

- (43) *A misero moribundae vitae somno ad perpetuam foelicis vitae vigiliam excitatio*
This poem was first printed in 1523 and we have no evidence for its having been completed before that date.

Manuscripts: none.

Printed editions: 33, 41.

- (44) *Insulae suae descriptio*

This descriptive poem about the territory of Mirandola was complete by 1524 as we know from the manuscript copies. It was dedicated to Gianfrancesco's son Giantommaso Pico, and it remained unprinted until the nineteenth century.

Manuscripts: 56, 75.

Printed editions: 102, 103 (with Tr. I).

- (45) Poems to Savonarola: (A) Inc.: *Nunc mihi non opus est* . . . , (B) Inc.: *Sacrum concinite* . . . , (C) Inc.: *Gaudium nobis socii* . . . , (D) Inc.: *Quo te sancte pater* . . .

These poems are of uncertain date and have never been printed. They vary in length, the first being several hundred lines long and the others much shorter.

Manuscripts: 3, 14, 24, 25 (incomplete), 43, 51, 69, 70, 84, 94 (incomplete).

Printed editions: none.

F. OTHER LITERARY WORKS

- (46) *In suorum hymnorum adnotationes et interpretamenta exordium*

This is a long and detailed commentary which Gianfrancesco wrote for his first three hymns (i.e. *Ad Sanctissimam Trinitatem*, *Ad Virginem*, *Ad Christum*). It accompanies these hymns in the first printed edition of 1507 and was dedicated to his son Giantommaso. There is no evidence that it was completed before the date of the first printing.

Manuscripts: none.

Printed editions: 12, 18.

- (47) *De imitatione libellus*

One of the most popular of Pico's writings, the *De imitatione* consists of a letter addressed to Pietro Bembo, Bembo's reply to this, and a second letter by Gianfrancesco which apparently was never actually sent to Bembo. These letters date from the years 1512-13, which Pico spent in Rome with Bembo. The originals seem to have been lost, but there are several manuscripts of the first letter. The first printed edition dates from 1518 and contains all three of the letters. Many of the later editions omit Pico's second letter. There is an English translation of Pico's first letter and of Bembo's reply (by Izora Scott, 1910).

Manuscripts: 9 (First letter only), 85 (First letter only).

Printed editions: 27, 35, 40, 42, 50, 51, 60, 63, 64, 66, 72, 78, 86, 95, 97, 105 (Tr. E), 109.

(48) *Dialogus in tres libros divisus: Titulus est strix sive de ludificatione daemonum*

This is a dialogue written against witchcraft and dedicated to Giovanni Manardo. It was first printed in 1523 and we have no evidence or its having been completed before that date. It has also been translated into Italian twice, the first time in 1524 by Leandro Alberti, the second time in 1555 by Turino Turini.

Manuscripts: none.

Printed editions: 33, 36 (Tr. I: Alberti), 49 (Tr. I: Turini), 52 (Tr. I: Alberti), 80, 101 (Tr. I: Turini).

(49) *Dialogus de adorazione*

This work was completed in 1524 as we know from the single extant manuscript. It was dedicated to Pope Clement VII and has never been printed.

Manuscript: 86.

Printed editions: none.

G. TRANSLATION

(50) *Iustini philosophi et martyris admonitorius gentium liber*

This work, which is no longer attributed to Justin Martyr, was translated by Pico sometime before 1505. It was first mentioned by him in the letters to Zasius (*Opera*, p. 866) and Wolf (p. 864) from that year. The first printing of the translation, which is dedicated to Zanobi Acciaiuoli, was in the *Opera* of 1506-07. It was often reprinted, remaining a standard translation for most of the sixteenth century.

Manuscripts: none.

Printed editions: 11, 14, 38, 46, 57, 61, 63, 72.

H. LETTERS

(51) The letters are scattered throughout the works and elsewhere. Those which can be found in none of the editions of Pico's work are listed in Section IIB below. In the three editions of the *Opera* are printed four books of letters. These were prepared for the edition of 1506-07 and were reprinted with few additions in the later editions. Consequently, it seems that the bulk of Pico's personal letters written after 1505 have not come down to us. See item 65, below.

J. LOST AND DOUBTFUL WORKS

(52) *Dialogus de serena conscientia*

This work was already completed in 1496. Refs.: Letter to Ercole Strozzi (1496), Opera, p. 855; Letter to Wolf, Opera, p. 865.

(53) *Nostrorum temporum historia* or *De historia meorum temporum universa*

This work is perhaps identifiable with an early version of the work entitled *Liber de veris calamitatum causis nostrorum temporum* (No. 8 above). The latter was not completed until about 1515 and the former was already mentioned in 1505. Refs.: Letter to Wolf, Opera, p. 865; Letter to Giraldi, Opera, pp. 878-79.

(54) *De dialectica libri quinque* or *Institutiones logicae*

This seems to be the most important of Pico's lost works. He mentions it often. It was completed by 1505 and was dedicated to his son Giantommaso Pico for whom it was meant as a guide to the study of logic. Refs.: Letter to Wolf, Opera, p. 865; Letter to Giantommaso Pico, Opera, p. 876; Letter to Giraldi, Opera, p. 877; Examen vanitatis, Opera, pp. 510, 579, 636, 658, 694, 724, 728, 749.

(55) *Translation into Latin of Theophrastus' Liber de igne*

This translation is mentioned in 1505. The "translation of Theophrastus" referred to in 1514 is probably the same. Refs.: Letter to Wolf, Opera, p. 865; Letter to Giraldi, Opera, p. 880.

(56) *Commentaria de anima rationali in Aristotelem*

The only mention we have of this work is in the letter to Giraldi, dated 1514. The extant *De immortalitate animae digressio* is quite possibly a fragment of this longer commentary. Refs.: Letter to Giraldi, Opera, pp. 878, 879.

(57) *Resolutio potestatis ecclesiasticae*

This work is mentioned in the letter to Giraldi of 1514, but at that time was not yet completed. It may be the same as his *Depulsoria calumniae romaniensis oratio* (No. 22 above). The description which Pico gives of the lost work seems to indicate this. Ref.: Opera, p. 878.

(58) *Adnotationes in sacra eloquia Veteris et Novi Testamenti*

The only references to this work are in the letter to Giraldi of 1514. Refs.: Opera, pp. 878, 879.

(59) *Adnotationes in leges civiles et pontificias*

This work is referred to only in the letter to Giraldi of 1514. Refs.: Opera, pp. 878, 879.

(60) *De humana perfectione*

This work is mentioned only in the letter to Giraldi from 1514. Refs.: Opera, pp. 878, 879.

(61) *De anathemate, libri duo*

This work, mentioned in the letter to Giraldi of 1514, seems to be the same as Pico's *Opusculum de sententia excommunicationis* (No. 17 above). It is a work dealing with Savonarola in two books, which seems to fit the description of the known work dealing with Savonarola. Ref.: Opera, p. 879.

(62) *Regulae adversus scrupulos*

This work is mentioned only in the letter to Giraldi of 1514. Ref.: Opera, p. 879.

(63) *Translation of St. John Chrysostom*

We have no indication of what works were translated by Pico, but only a single reference in the letter to Giraldi of 1514. Ref.: Opera, p. 880.

(64) *Triplici de causa*

This work, which was to continue the polemic of Giovanni Pico against the pseudo-sciences, was proposed already in 1505, but we have no evidence that it was ever completed. Ref.: Letter to Wolf, Opera, p. 865.

(65) *Letters*

In the letter to Giraldi in 1514 Pico mentions among his works *Epistolarum varii generis libri septem*. Only four books of letters were published in the *Opera* of 1506–1507 and only scattered letters were published after that. This would seem to indicate that at least three books of letters have been lost. Ref.: Opera, p. 878.

SECTION II

PRINTED PRIMARY SOURCES

A. EDITIONS OF GIANFRANCESCO PICO'S WORKS

(1) *Commentationes Ioannis Pici Mirandulae in hoc volumine contentae: quibus anteponitur vita per Ioannem Franciscum illustris principis Galeotti Pici filium conscripta.* Bologna: Benedictus Hector, 1496. Refs.: HC 12,992; Goff P632. Copies: BM, BN, ICN.

Contents: 1, 23.

(2) *Ioannis Francisci Pici Mirandulae de morte Christi et propria cogitanda libri tres. Eiusdem de studio divinae et humanae philosophiae libri duo.* Bologna: Benedictus Hector, 1497. Refs.: HC 13,002; Goff P644. Copies: BM, BN (a copy on vellum), ICN.

Contents: 2, 12.

(3) *Ioannis Francisci Pici Mirandulae opusculum de sententia excommunicationis iniusta pro Hieronymi Savonarolae viri prophetae innocentia.* [Florence: Societas Colubris or Compagnia del Drago, 1497]. Refs.: CR 4753, Goff P642. Copies: BM, BN.

Contents: 17.

(4) *Defensio Hieronymi Savonarolae Ferrariensis ordinis predicatorum adversus Samuelem Cassinensem: per Ioannem Franciscum Picum Mirandulanum edita: ad Hieronymum Tornielum ordinis fratrum minorum generalem vicarium.* [Florence: Laurentius de Morgianis et Ioannes Petri or Bartolommeo de'Libri, 1497]. Ref.: HR 13,003. Copies: FBN, FerBC.

Contents: 18.

(5) *Epistola del conte Zoanfrancesco de la Mirandula in favore de fra Hieronymo da Ferrara dappoi la sua captura.* [Modena: Domenico Rocciola, 1498]. Ref.: R 1321. Copies: FBR, PBP.

Contents: 19.

(6) *Ioannis Pici Mirandulae omnia opera . . .* Venice: Bernardinus Venetus de Vitalibus, 1498. Refs.: HC 12,993, Goff P634. Copies: BM, BN, MH, NNC, ICN.

Contents: 1, 23.

(7) Ioannis Francisci Pici liber de imaginatione. Venice: Aldus, 1501. Refs.: Renouard, 32; Brunet, IV, 638. Copies: BM, BN, MH.

Contents: 3.

(8) Ioannis Francisci Pici Mirandulae nepotis opera ... [Venice: Bernardus Venetus de Vitalibus, 1503]. Refs.: R 4752 (dated 1496); Goff P645. Copy: BM.

Contents: 2, 12, 17, 18.

(9) Opera Ioannis Pici Mirandulae ... novissime accurate revisa ... Strasbourg: Johann Pruess, 1504. Refs.: Panzer, VI, 31; Ritter, III, 1194-95. Copy: BM.

Contents: 1, 23.

(10) Ioannis Pici Mirandulae omnia opera ... [Reggio in Emilia]: Ludovicus de Mazalis, 1506. Refs.: Panzer, VIII, 244. Copies: BM, NjP.

Contents: 1, 23.

(11) Ioannis Francisci Pici Mirandulae domini et Concordiae comitis, de rerum praenotione libri novem pro veritate religionis contra superstitiosas vanitates editi ... Strasbourg: Johann Knobloch, 1506-07. (Issued in several fascicles with different signatures and bound in different order in different copies). Refs.: Ritter, III, 1195-98; Panzer, VI, 35 & 37. Copies: BM, BN.

Contents: 1, 2, 3, 4, 12, 13, 14, 23, 26, 50, 51.

(12) Ioannis Francisci Pici Mirandulae principis Concordiaeque comitis hymni heroici tres ad Sanctissimam Trinitatem, ad Christum, et ad Virginem Mariam: una cum commentariis luculentissimis ad Ioannem Thomam filium. Milan: Alexander Minutianus, 1507. Refs.: Panzer, VII, 383; Graesse, V, 284, Goff P641a. Copies: BM, NN.

Contents: 27, 28, 29, 30, 31, 46.

(13) Ioannis Francisci Pici Mirandulae domini Concordiaeque comitis liber de providentia Dei contra philosophastros. Novi: Benedictus Ducibellus Mangius Carpensius, 1508. Refs.: Panzer, VII, 486; Graesse, V, 284. Copies: BM, BN, MH, NNC, ICN.

Contents: 5.

(14) Symphoriani Champerii de triplici disciplina cuius partes sunt: philosophia naturalis, medicina, theologia, moralis philosophia ... contenta in hoc volumine ... Lyon: Claudius Davost, 1508. Refs.: Panzer, VII, 290; Graesse, II, 114. Copies: BM, BN, MH.

Contents: 50 (fols. mm^v-nn^{6v}).

(15) Ioannis Francisci Pici Mirandulae domini Concordiaeque comitis liber de providentia Dei contra philosophastros. Strasbourg: Johann Gruninger, 1509. Refs.: Panzer, VI, 43; Ritter, III, 1198. Copy: BM.

Contents: 5.

(16) Here is conteyned the lyfe of Johan Picus Erle of Myrandula a grete lord of Italy an excellent conning man in all sciences and verteuous of lyving ... London: John Rastell, [1510]. Refs.: Graesse, V, 285; Gibson, no. 67.

Copy: BM. According to Gibson this is the original edition, and no. 17 below was based on this one.

Contents: 23 (Tr. E).

(17) Here is conteyned the lyfe of Johan Picus Erle of Myrandula a grete lorde of Italy an excellent connyng man in all sciences and verteous of lyvyng . . . London: Wynkyn de Worde, [1510]. Refs.: Graesse, V, 285; Gibson, no. 68. Copies: BM, NML.

Contents: 23 (Tr. E).

(18) Ioannis Francisci Pici Mirandulani principis Concordiaeque comitis hymni heroici tres ad Sanctissimam Trinitatem, ad Christum, et ad Virginem Mariam, una cum commentariis luculentissimis ad Ioannem Thomam filium . . . Strasbourg: Matthias Schurer, 1511. Refs.: Panzer, VI, 53; Ritter, III, 1199. Copies: BM, BN, MH, NN.

Contents: 26, 27, 28, 29, 30, 31, 46.

(19) Staurostichon, hoc est carmen de mysteriis dominicae crucis nuper in Germaniam delapsis. Tuebingen: Thomas Anshelm, 1512. Refs.: Panzer, VIII, 323; Ritter, III, 120. Copies: BM, BN, MH, NN, CtY, ICN.

Contents: 26.

(20) Ioannis Francisci Mirandulae domini de expellendis venere et cupidine carmen heroicum. Eiusdem hymnus de divo Laurentio . . . Strasbourg: Johann Schott, 1513. Refs.: Panzer, VI, 61; Ritter, III, 1200. Copies: BM, MH.

Contents: 32, 34.

(21) Illustrissimi ac doctissimi principis Joannis Francisci Pici Mirandulae domini et Concordiae comitis de venere et cupidine expellendis carmen. Item eiusdem Laurentius et Geminianus hymni. Rome: Jacobus Mazochius, 1513. Ref.: Tiraboschi, 115. Copies: BN, CtY, ICN.

Contents: 32, 33, 34.

(22) (F) Ioannis Francisci Pici Mirandulani principis Concordiaeque comitis hymni heroici tres ad Sanctissimam Trinitatem, ad Christum, et ad Virginem Mariam. Leipzig: Melchior Lotter, 1514. Refs.: Panzer, VII, 184; Tiraboschi, 115. Copy: IU.

Contents: 28, 29, 30, 31.

(23) Ioannis Francisci Pici Mirandulae domini et Concordiae comitis de amore divino. Libri quattuor. Rome: Jacobus Mazochius, 1516. Refs.: Sander, 5679; Tiraboschi, 115. Copies: BN, CtY.

Contents: 15.

(24) Ioannis Francisci Pici Mirandulani principis Concordiaeque comitis hymni heroici tres, ad Sanctissimam Trinitatem, ad Christum, et ad Virginem Mariam. Leipzig: Valentin Schuman, 1517. Refs.: Panzer, VII, 199; Tiraboschi, 115. Copy: BN.

Contents: 28, 29, 30, 31.

(25) Ioannis Francisci Pici Mirandulani principis Concordiaeque comitis hymni heroici tres ad Sanctissimam Trinitatem, ad Christum, et ad Virgi-

nem Mariam . . . Vienna: Hieronymus Victor, 1517. Refs.: Panzer, IX, 33; Tiraboschi, 114. Copy: BN.

Contents: 28, 29, 30.

(26) Ioannis Pici omnia opera . . . Paris: Jehan Petit, 1517. Refs.: Panzer, VIII, 39; Graesse, V, 283. Copies: BM, CtY.

Contents: 1, 23.

(27) Ioannis Francisci Pici Mirandulae domini Concordiaequae comitis physici libri duo, I. De appetitu primae materiae ad cardinalem S. Mariae in Porticu. II. De elementis ad cardinalem Gurcensem. Et rhetorici duo de imitatione ad Petrum Bembum. Petri Bembi Veneti de imitatione liber unus. Basel: Johann Froben, 1518. Refs.: Panzer, VI, 205; Santangelo, 1. Copy: BN.

Contents: 6, 47.

(28) Ioannis Francisci Pici Mirandulae domini et Concordiae comitis liber de veris calamitatum causis nostrorum temporum ad Leonem X Pontificem Maximum. Mirandola: Ioannes Mazochius, 1519. Refs.: Graesse, V, 284-85; Brunet, IV, 638; Copies: BM, BN, MH, ICN.

Contents: 8.

(29) Ioannis Pici Mirandulae opera omnia . . . Venice: Gulielmus de Fontaneto, 1519. Ref.: Panzer, VIII, 457. Copy: BM.

Contents: 1, 23.

(30) Ioannis Francisci Pici Mirandulae domini et Concordiae comitis ad Leonem Pontificem Maximum et Concilium Lateranensem de reformandis moribus oratio. Eiusdem hymni tres D. Martino, Magdalenae et Antonio decantati. Hagenau: Thomas Anshelm, 1520. Refs.: Panzer, VII, 90; Ritter, III, 1200. Copies: BM, BN, MH.

Contents: 16, 35, 36, 37.

(31) Ioannis Francisci Pici Mirandulae domini et Concordiae comitis examen vanitatis doctrinae gentium et veritatis Christianae disciplinae distinctum in libros sex, quorum tres omnem philosophorum sectam universim, reliqui Aristotelem et Aristoteleis armis particulatim impugnant ubicunque autem Christiana et asseritur et celebratur disciplina. Mirandola: Ioannes Mazochius, 1520. Refs.: Panzer, VII, 406; Graesse, V, 285. Copies: BM, MH, NN, NNC.

Contents: 9.

(32) Ioannis Francisci Pici Mirandulae opusculum de sententia excommunicationis iniusta pro Hieronymi Savonarolae viri prophetae innocentia. Wittenberg: Melchior Lotter, 1521. Refs.: Panzer, IX, 78; Graesse, V, 284. Copy: BM.

Contents: 17.

(33) Ioannis Francisci Pici Mirandulae domini et Concordiae comiti &c dialogus in tres libros divisus: Titulus est strix sive de ludificatione daemonum. Eiusdem ad Leonem X et Concilium Lateranensem de reformandis moribus oratio. Eiusdem pro asserendis a calumnia libris Dionysii Areo-

pagitae epistola. Eiusdem ad excitandum genus humanum a vitae huius somno ad futurae vigiliam carmen. Bologna: Hieronymus de Benedictis, 1523. Refs.: Panzer, VI, 334; Graesse, V, 285. Copies: BM, BN, MH, NN, ICN.

Contents: 16, 21, 43, 48.

(34) Ioannis Francisci Pici Mirandulae domini et Concordiae comitis &c de animae immortalitate digressio. Bologna: Hieronymus de Benedictis, 1523. Refs.: Graesse, V, 285; Nicéron, 154. Copies: MH, NNC.

Contents: 10.

(35) Ioannis Francisci Pici Mirandulae domini Concordiaeque comitis physici libri duo. De appetitu primae materiae. De elementis et rhetorici quoque duo de imitatione ad Petrum Bembum cum uno ipsius Bemi ea de re libro. Bologna: Hieronymus de Benedictis, 1523. Ref.: Graesse, V, 285. Copies: BN (under Giovanni Pico), NNC.

Contents: 6, 47.

(36) Libro detto strega o delle illusioni del demonio del signore Gianfrancesco Pico della Mirandola. Bologna: Hieronymus de Benedictis, 1524. Refs. Panzer, VI, 335; Graesse, V, 285. Copies: BM, NN, CtY.

Contents: 48 (Tr. I).

(37) Francisci Pici Mirandulani ac Concordiae domini epistola apologetica pro S. Dionysio Areopagita. Ingolstadt:?, 1526. Ref.: Panzer, VII, 128. Copies: VL, MunS.

Contents: 21.

(38) Antidotum contra diversas omnium fere seculorum haereses. Editor: Johannes Sichardus. Basel: Henricus Petrus, 1528. Refs.: Panzer, VI, 266-67; Tiraboschi, 120. Copies: BM, BN.

Contents: 50 (fols. 112-122).

(39) Ioannis Francisci Pici Mirandulae de morte Christi et propria cogitanda libri tres. Eiusdem de studio divinae et humanae philosophiae libri duo: nunc denuo ad veteris exemplaris fidem per Franciscum Zampinum plene restituti. Paris: In clauso Brunello, ad insigne Geminarum Cipparum, 1528. Ref.: none. Copy: PaM.

Contents: 2, 12.

(40) Ioannis Francisci Pici ad Petrum Bembum de imitatione libellus. Venice: Ioannes Antonius eiusque fratres de Sabio, 1530. Refs.: Panzer, XI, 533; Santangelo, 2. Copy: BM.

Contents: 47.

(41) Ioannis Francisci Pici Mirandulae domini et Concordiae comitis &c hymni heroici decem post tres priores ad diversos coelites. Item eiusdem principis poema eodem metro quo excitamur a somno miseriae vitae ad tranquillam et perpetuam vigiliam. Bologna: Ioannes Baptista Phaellus, 1531. Ref.: Tiraboschi, 115. Copy: BM.

Contents: 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43.

(42) Petri Bembi opuscula aliquot. Lyon: Gryphius, 1532. Refs.: Panzer, VII, 353; Santangelo, 4. Copies: BM, BN.

Contents: 47 (pp. 68–109).

(43) Fasciculus rerum expetendarum et fugiendarum . . . Editor: Ortuin Gratus. Cologne:?, 1535. Refs.: Panzer, VI, 431; Graesse, III, 140. Copies: BM, BN, NNC.

Contents: 16 (fols. 208v–210v).

(44) Virorum qui superiori nostroque seculo eruditione et doctrina illustres atque memorabiles fuerunt vitae iamprimum in hoc volumen collectae. Editor: Joannes Fichardus. Frankfurt: Christianus Egenolph, 1536. Ref.: Panzer, VII, 53. Copies: BM, BN.

Contents: 23 (fols. 58v–72v).

(45) De ΦΑΝΤΑΣΙΑ Ioannis Francisci Mirandulae liber, in quoque imaginationis facultas, natura, quaeque ei erroris causa sit, quibusque remedium praesidiis occurri possit. Basel: Henricus Petrus, 1536. Refs.: Panzer, VI 314; Tiraboschi, 114. Copies: BM, NNUT.

Contents: 3.

(46) Justini philosophi et martyris admonitiorum gentium liber, Joanne Francisco Pico Mirandulae domino interprete, nunc denuo ad exemplar Graecum collatus et qua licuit fide recognitus. Paris: In aedibus Carolae Guillardae ad solem aureum, 1538. Ref.: Nicéron, 152. Copy: BN.

Contents: 50.

(47) Ioannis Francisci Pici Mirandulae domini et Concordiae comitis &c de animae immortalitate docta et arguta digressio numquam prius in Galliis excusa. Paris: Ioannes Royni, 1541. Refs.: Tiraboschi, 118 (date given as 1542), Nicéron, 154–55. Copy: BN (under Giovanni Pico).

Contents: 10.

(48) Ioannis Francisci Pici Mirandulae domini Concordiaeque comitis in tertium Aristotelis de anima librum extracta digressio, de animae immortalitate. Padua: Ioannes Baptista Amycus, 1553. Copies: FBM, RBA, RBV.

Contents: 10.

(49) Dialogo intitolato la strega ovvero degli inganni de' demoni tradotto in lingua toscana per il signor abate Turino Turini da Pescia. Pescia: Lorenzo Terrentino, 1555. Refs.: Brunet, suppl., II, 233–34; Tiraboschi, 118. Copies: MH, NN.

Contents: 48 (Tr. I: Turini).

(50) De elocutionis imitatione ac apparatu liber unus auctore Jacobo Omphalio . . . His acceperunt Ioannis Francisci Pici Mirandulae ad Petrum Bembum et Petri Bembi ad Ioannem Franciscum Picum Mirandulam de imitatione epistolae duae. Paris: Gulielmus Iulianus, 1555. Refs.: Tiraboschi, 115; Santangelo, 7. Copies: BN, ICU.

Contents: 47 (pp. 232–72).

(51) Petri Bembi patritii Veneti . . . opera. Basel: [Thomas Guarinus], 1556. Ref.: Santangelo, 8. Copies: BM, BN.

- Contents: 47 (in vol. III, pp. 3-41).
- (52) Libro detto strega overo delle illusioni del demonio del signor Giovan Francesco Pico de la Mirandola . . . Venice: "nella contrada di Santa Maria Formosa, al segno de la speranza," 1556. Ref.: Niceron, 155 (dated 1456). Copy: BN.
- Contents: 48 (Tr. I: Alberti).
- (53) The works of Sir Thomas More . . . sometime Lorde Chauncellour of England, wrytten by him in the Englysh tonge. London: J. Cawod, J. Waley, and R. Tottell, 1557. Refs.: Graesse, V, 285; Brunet, IV, 639; Gibson, no. 73. Copies: BM, BN, CtY, NNC.
- Contents: 23 (Tr. E).
- (54) Traite de l'imagination tire du latin de Pic de la Mirandole par J(ean)-A(ntoine) d(e) B(aif). Paris: Andre Wechel, 1557. Refs.: Graesse, V, 284; Brunet, IV, 638. Copy: MunS.
- Contents: 3 (Tr. F).
- (55) Opera omnia Ioannis Pici Mirandulae . . . Basel: Henricus Petrus, 1557. Ref.: Graesse, V, 283. Copy: BN.
- Contents: 1, 23.
- (56) Ioannis Pici Mirandulae . . . omnia quae extant opera. Venice: Hieronymus Scotus, 1557. Copies: BM, CtY.
- Contents: 1, 23.
- (57) ΜΙΚΡΟΠΡΕΣΒΥΤΙΚΟΝ. Basel: Henricus Petrus, 1560. Copy: BM (under Justin Martyr).
- Contents: 50 (pp. 31-47).
- (58) Farrago poematum ex optimis quibusque et antiquioribus et aetatis nostrae poetis selecti per Leodegarium à Quercu . . . Paris: Hieronymus de Marnef, 1560. Ref.: Niceron, 156. Copy: BN (under Duchesne, Léger).
- Contents: 27, 28, 29, 30, 31 (fols. 84r-113r).
- (59) Farrago poematum ex optimis quibusque et antiquioribus et aetatis nostrae poetis selecti per Leodegarium à Quercu . . . Paris: Gulielmus Cavelat, 1560. (This edition differs from the preceding only in the name and device of the printer on the title page). Copy: BN (under Duchesne, Léger).
- Contents: 27, 28, 29, 30, 31 (fols. 84r-113r).
- (60) Petri Bembi Patricii Veneti quaecunque usquam prodierunt opera in unum corpus collecta . . . Basel: Thomas Guarinus, 1567. Ref.: Santangelo, 9. Copy: BN.
- Contents: 47 (in vol. III, pp. 3-41).
- (61) Monumenta S. Patrum Orthodoxographa . . . Editor: Joannes J. Grynaeus. Basel: Henricus Petrus, 1569. Refs.: Graesse, III, 165; Tiraboschi 120. Copies: BM, BN.
- Contents: 50 (in vol. III, pp. 1947-66).
- (62) Opera omnia Ioannis Pici . . . Basel: Henricus Petrus, 1572. Refs.: Graesse, V, 283; Brunet, IV, 636. Copies: BM, BN, MH, NN, NNC, NNUT CtY, ICN.

Contents: 1, 23.

(63) *Opera omnia Ioannis Francisci Pici* . . . Basel: Henricus Petrus, 1573. (Uniform with the preceding).

Contents: 1, 2, 3, 4, 6, 9, 12, 13, 14, 26, 47, 50, 51.

(64) *De elocutionis imitatione ac apparatu liber unus auctore Jacobo Omphalio* . . . His accesserunt Joannis Francisci Pici *Mirandulae ad Petrum Bembum et Petri Bembi ad Joannem Franciscum Picum Mirandulam de imitatione epistolae duae*. Paris: Gulielmus Iulianus, 1575. Ref.: Santangelo, 11. Copies: BM, BN.

Contents: 47.

(65) *A reprint of no. 54. Paris: André Wechel, 1577. Refs.: Graesse, V, 284; Brunet, IV, 638; Caplan, 10.

Contents: 3 (Tr. F).

(66) *De elocutionis imitatione ac apparatu liber unus. Auctore Jacobo Omphalio* . . . His accesserunt Joannis Francisci Pici *Mirandulae ad Petrum Bembum et Petri Bembi ad Joannem Franciscum Picum Mirandulam de imitatione epistolae duae*. Paris: Gulielmus Iulianus, 1579. Ref.: Santangelo, 12. Copy: BN.

Contents: 47 (fols. 276r-306v).

(67) *Ioannis Francisci Pici Mirandulae et Concordiae domini de auro libri tres* . . . Venice: Ioannes Baptista Somaschus, 1586. Refs.: Graesse, V, 285; Tiraboschi, 118. Copies: BM, BN, NN.

Contents: 11.

(68) *Ioannis Francisci Pici Mirandulae et Concordiae domini de auro libri tres* . . . Ferrara: Victorius Baldinus, 1587. Refs.: Graesse, V, 285; Tiraboschi, 118. Copies: BM, NN, NNC, CtY.

Contents: 11.

(69) *De phantasia aureolus sane Iohannis Francisci Mirandulae liber*. Wittenberg: Matthias Welack, 1588. Ref.: Caplan, 8. Copy: ICN.

Contents: 3.

(70) *Joannis Francisci Pici Mirandulae* . . . libri III de auro, opus in quo de auro . . . disseritur . . . Ursel: Cornelius Sutorius, 1598. Refs.: Tiraboschi, 118; Nicéron, 156. Copies: BM, BN.

Contents: 11.

(71) *Ioannis Pici Mirandulae* . . . opera quae extant omnia. Basel: Henricus Petrus, 1601. Refs.: Graesse, V, 284; Brunet, IV, 636. Copies: BM, BN, MH.

Contents: 1, 23.

(72) *Ioannis Francisci Pici Mirandulae* . . . opera quae extant omnia. Basel: Henricus Petrus, 1601. (Uniform with the preceding).

Contents: 1, 2, 3, 4, 6, 9, 12, 13, 14, 16, 26, 47, 50, 51.

(73) *Germanicarum rerum scriptores aliquot insignes hactenus incogniti* . . . Editor: Marquard Freher. Frankfurt-Hanover: Typis Welchianis, 1600-11. Refs.: Graesse, II, 632; Brunet, II, 1388. Copies: BM, BN, NNC.

Contents: 26 (in vol. II (Frankfurt, 1602), pp. 242-50).

(74) *Theatrum chemicum praecipuos selectorum auctorum tractatus de chemiae et lapidis philosophici antiquitate . . .* Ursel: Cornelius Sutorius, 1602. Copies: RBA, RBV.

Contents: 11 (in vol. II, pp. 357-432).

(75) *Apologia Joannis Francisci Pici Mirandulae nepotis pro Hieronymi Savonarolae viri prophetae innocentia ad Herculem Aestensem.* [Leipzig]: Gotthard Voegelin, [c. 1605]. Refs.: Brunet, suppl., II, 234; Tiraboschi, 113. Copies: BM, BN, ICU.

Contents: 17.

(76) *Speculum ecclesiae pontificiae Nicolaus Clemangis archidiaconus Baiocensis . . .* Editor: Edward Bulkeley. London: George Bishop, 1606. Copies: BM, NNUT.

Contents: 16 (pp. 250-74).

(77) *Delitiae CC Italarum poetarum huius superiorique aevi illustrium.* Editor: Jan Gruter. [Frankfurt]: Jona Rosa, 1608. Ref.: Niceron, 156. Copies: BM (under Ranutius Gherus), BN (under Janus Gruter), NN, NNC.

Contents: 32 (in vol. II, pp. 205-16).

(78) *Petri Bembi Patritii Veneti cardinalis omnia quotquot reliqua praeter Venetam historiam et epistolas extant opuscula. Nempe de imitatione libellus.* Strasbourg: Lazar Zetzner, 1609. Ref.: Santangelo, 14. Copy: BM.

Contents: 47 (in vol. III, pp. 713-50).

(79) *Discursus epistolares politico-theologici de statu reipublicae Christianae degenerantis: Tum de reformandis moribus et abusibus ecclesiae . . .* Frankfurt: Egenolphus Emmelius, 1610. Ref.: Niceron, 153. Copies: VL, RBA.

Contents: 16 (pp. 1-13).

(80) *Johannis Francisci Pici Mirandulae domini Concordiaeque comitis strix sive de ludificatione daemonium dialogi tres nunc primum in Germania eruti ex bibliotheca M. Martini Weinrichii.* Strasbourg: Paul Ledertz, 1612. Refs.: Graesse, V, 285; Tiraboschi, 118. Copies: BM, BN, ICU.

Contents: 48.

(81) *Theatrum chemicum praecipuos selectorum auctorum tractatus de chemiae et lapidis philosophici antiquitate, veritate, jure, praestantia et operationibus continens . . .* Editor: Lazar Zetzner. Strasbourg: Lazar Zetzner, 1613. Ref.: Niceron, 156. Copies: BM, NNC.

Contents: 11 (in vol. II, pp. 337-408).

(82) *Monarchiae S. Romani Imperii sive tractatus de iurisdictione imperiali seu regia . . .* Editor: Melchior Goldast. Frankfurt: Nicolaus Hoffmann, 1614. Refs.: Graesse, III, 110; Brunet, II, 1649. Copies: BM, BN, NNC.

Contents: 17 (in vol. II, pp. 1635-48).

(83) *Defensio Hieronymi Savonarolae . . . adversus Samuelem Cassinensem per Joannem Franciscum Picum edita . . . "In metropoli qua Francia mixta Suevis,"* 1615. Refs.: Graesse, V, 284; Niceron, 154. Copies: BM, BN.

Contents: 18.

(84) Joannis Francisci Pici Mirandulae . . . liber de providentia Dei contra philosophastros. [Leipzig or Heidelberg]: Gotthard Voegelin, [c. 1615]. Refs.: Brunet, suppl. II, 233; Tiraboschi, 114. Copies: BM, BN.

Contents: 5.

(85) Vita della Beata Caterina Mattei da Racconisio Monaca del terzo ordine di S. Domenico cavata da gli scritti latini del Signor Gio. Francesco Picco [!], Signore della Mirandola, dal R. P. maestro Serafino Razzi dell'Ordine de' Predicatori. Turin: Giovanni Antonio Seghino, 1622. Ref.: Amedeo, 71. Copy: MilA.

Contents: 25 (Tr. I).

(86) Cardinalis Petri Bembi . . . omnia quaecumque usquam in lucem prodierunt opera . . . Strasbourg: Lazar Zetzner, 1652. Ref.: Santangelo, 16. Copy: BN.

Contents: 47.

(87) Theatrum chemicum praecipuos selectorum authorum tractatus de chemiae et lapidis philosophiae antiquitate, veritate, jure, praestantia et operationibus continens . . . Strasbourg: Eberhard Zetzner, 1659. Refs.: Graesse, VI, II, 110; Brunet, V, 773. Copies: BM, NNC.

Contents: 11 (in vol. II, pp. 312-77).

(88) Vita R. P. fratris Hieronymi Savonarolae Ferrariensis ordinis praedicatorum auctore illustrissimo domino Ioanne Francisco Pico Mirandulae Concordiaeque principe. Editor: J. Quétif. Paris: Ludovicus Billaine, 1674. Refs.: Tiraboschi, 119; Nicéron, 154. Copies: BM, BN, NNUT.

Contents: 17, 24.

(89) Vitae selectorum aliquot virorum qui doctrina, dignitate, aut pietate inclaruere. Editor: William Bates. London: George Wells, 1681. Refs.: Graesse, I, 310; Brunet, V, 1322-23. Copies: BM, BN, NNC.

Contents: 23 (pp. 90-105), 34 (pp. 107-40).

(90) Compendio delle cose mirabili della venerabile serva di Dio, Catterina da Raconisio vergine integerrima del sacro ordine della penitenza di S. Domenico, distinto in dieci libri e composto dall'illustrissimo signor Giovanni Francesco Pico . . . et ultimato da . . . frate Pietro Martire Morelli da Garressio . . . [Bologna, c. 1681]. Refs.: Tiraboschi, 119; Amedeo, 82. Copies: BBC, BBU.

Contents: 25 (Tr. I).

(91) Fasciculus rerum expetendarum et fugiendarum prout ab Orthuino Gratio . . . editus est Coloniae A. D. MDXXXV . . . London: Richard Chiswell, 1690. Refs.: Graesse, III, 140; Brunet, II, 1715. Copies: BM, BN, NNC, ICG.

Contents: 16 (in vol. I, pp. 417-21).

(92) Ioannis Jacobi Mangeti . . . bibliotheca chemica curiosa seu rerum ad alchemiam pertinentium thesaurus instructissimus. Geneva: Chouet, G. de

Tournes, Cranmer, Perachon, Ritter, & S. de Tournes, 1702. Refs.: Graesse, IV, 363; Brunet, III, 1365. Copies: BM, BN.

Contents: 11 (in vol. II, pp. 558-84).

(93) *Ioannis Francisci Pici Mirandulae de studio divinae et humanae philosophiae libri duo*. Editor: Ioannes Franciscus Buddeus. Halle:?, 1702. Refs.: Tiraboschi, 113; Nicéron, 151. Copies: BM, IU.

Contents: 2.

(94) *Rerum Germanicarum scriptores* ... Editor: B. G. Struve. Strasbourg: Johann Reinhold Dulsecker, 1717. Refs.: Graesse, II, 632; Brunet, II, 1388. Copies: BM, BN, NNC.

Contents: 26 (in vol. II, pp. 493-506).

(95) *Carmina illustrium poetarum Italorum*. Florence: Ioannes Cajetanus Tartinius & Santis Franchius, 1719-24. Copy: FBR.

Contents: 32, 34 (in vol. VII (1720), pp. 194ff.).

(96) *Collectio praestantissimorum opusculorum de imitatione oratoria*. Editor: Friedrich Andreas Hallbauer. Jena: Christianus Franciscus Buschius, 1726. Ref.: Santangelo, 17. Copy: RBA.

Contents: 47 (pp. 234-74).

(97) *Opere del Cardinale Pietro Bembo ora per la prima volta tutte in un corpo unite*. Venice: Francesco Hertzhauser, 1729. Refs.: Graesse, I, 332; Brunet, I, 764. Copies: BM, BN.

Contents: 47 (in vol. IV, pp. 329-41).

(98) *Vita e pontificato di Leone X di Guglielmo Roscoe* ... tradotta e corredata di annotazioni e di alcuni documenti inediti dal conte Cav. Luigi Bossi milanese ... Milan: Tipografia Sonzogno, 1816-17. Copies: BM, BN, NNC.

Contents: 16 (in vol. VIII, pp. 109-17).

(99) *Compendio delle cose mirabili della Beata Caterina da Racconigi* ... composto da Giovanni Francesco Pico ... e ultimato dal ... frate Pietro Martire Morelli da Garressio. Chieri & Turin: Tipografia Fory e Dalmazzo, 1858. Ref.: Amedeo, 82. Copy: MirB.

Contents: 25 (Tr. I).

(100) *Ioannis Francisci Pici Mirandulae domini Concordiae comitis liber de veris calamitatum causis nostrorum temporum* ... Editor: Fernando Calori-Cesis. Modena: Antonio & Angelo Cappelli, 1860. Copies: BM, BN.

Contents: 8.

(101) *La strega ovvero degli inganni de'demoni*. Dialogo di Giovan Francesco Pico della Mirandola tradotto in lingua toscana da Turino Turini. Milan: G. Daelli, 1864. Ref.: Brunet, IV, 638. Copies: BM, NN, MH, CtY.

Contents: 48 (Tr. I: Turini).

(102) *Ioannis Francisci Pici Mirandulae insulae suae descriptio*. Editor: Felice Ceretti (per nozze Molinari-Vandelli). Mirandola: Caragelli, 1879. Copies: BM, NNC.

Contents: 44:

(103) *Descrizione latina dell'isola della Mirandola del conte Giovanni Francesco II Pico tradotta in versi italiani da Ercole Sola*. Editor: Felice Ceretti (nearly the same as the preceding, but with an Italian translation and a slightly different editorial introduction). Mirandola: Cagarelli, 1879. Copies: BM, NNC.

Contents: 44 (with Tr. I).

(104) *Giovanni Pico della Mirandola: His Life by His Nephew Giovanni Francesco Pico . . . Translated from the Latin by Sir Thomas More, edited with an Introduction and Notes by J. M. Rigg*. London: D. Nutt, 1890. Copies: BM, BN, NNC, etc.

Contents: 23 (Tr. E).

(105) *Izora Scott, Controversies over the Imitation of Cicero*. New York: Teachers College, Columbia University, 1910. Copy: NNC.

Contents: 47 (in vol. II, pp. 1-18).

(106) *Gianfrancesco Pico della Mirandola On the Imagination. The Latin Text with an Introduction, an English Translation, and Notes by Harry Caplan*. New Haven: Yale University Press, 1930. Copies: BM, NNC, etc.

Contents: 3 (with Tr. E).

(107) *The English Works of Sir Thomas More*. Editors: W. E. Campbell *et al.* London and New York: Eyre and Spottiswoodie, and Lincoln MacVeagh, 1927-31. Copies: BM, NNC, etc. This is a photographic reprinting of the 1557 edition.

Contents: 23 (Tr. E; vol. I, pp. 1-20).

(108) *Operecta dello M. S. Johanfrancesco Pico della Mirandola in difesa della opera di Pietro Bernardo da Firenze servo di Jesu Cristo*. Editor: Paolo Cherubelli (per nozze Bellini-Manifredi). Florence: Stamperia Rinaldi, 1943. Copies: FBN, FBM.

Contents: 20.

(109) *Le epistole "de imitatione" di Giovanfrancesco Pico della Mirandola e di Pietro Bembo*. Editor: Giorgio Santangelo. Florence: Leo S. Olschki, 1954. Copies: BM, NNC, etc.

Contents: 47.

(110) *Ioannis Pici Miranduale viri omni disciplinarum genere consumatissimi vita per Ioannem Franciscum illustris principis Galeotti Pici filium conscripta*. In the series: *Deputazione di storia patria per le antiche provincie modenesi*. Biblioteca - nuova serie, n. 1. Editor: Tommaso Sorbelli. Modena: Aedes Muratoriana, 1963.

Contents: 23 (with Tr. I).

B. FUGITIVE LETTERS

See also Section III, nos. 13, 30, 33, 44, 55

(1) *Pietro Bembo - Petri Bembi . . . epistolarum Leonis Decimi . . . nomine scriptarum libri sexdecim* (Cologne, 1584), pp. 297-98, 417. Two letters to Pico, dated 1516 and August 27, 1517.

- (2) Celio Calcagnini – Caelii Calcagnini . . . opera aliquot (Basel, 1544), pp. 104, 106–07, 111–12. Three letters to Pico. One is dated January 5, 1522. The others are undated but seem to be from the period 1523–24.
- (3) Conrad Celtis – Hans Rupprich (ed.), *Der Briefwechsel des Konrad Celtis* (Munich, 1934), p. 524. One letter by Pico, dated 1502.
- (4) Pietro Crinito – Angeli Politiani opera . . . (Lyon, 1533). II, pp. 291–93. A single letter from Crinito to Pico, dated April 1, 1497.
- (5) Johann Essler – Claudii Ptolemei . . . geographiae opus (Strasbourg, 1513), fol. A1^v. A single letter by Pico, dated August 29, 1508. (An Italian translation is printed in Felice Ceretti, *Sulla Geografia di Claudio Tolmeo. Lettera del conte Giovan Francesco II Pico della Mirandola* . . . (Mirandola, 1903), per nozze Christini–Zani. Copies of both these rare editions are in the Bibl. Estense in Modena).
- (6) Marsilio Ficino – Paul Oskar Kristeller (ed.), *Supplementum Ficinianum* (Florence, 1937), II, p. 93. One letter from Ficino, dated November 1, 1495.
- (7) Giovanni Manardo – Ioannis Manardi . . . epistolarum medicinalium libri XX . . . (Venice, 1542), pp. 217–18. One letter from Manardo, dated December 13, 1524.
- (8) Aldo Manuzio – Antoine-Augustin Renouard (ed.), *Lettere di Paolo Manuzio* . . . (Paris, 1834), pp. 338–45. Six letters by Gianfrancesco Pico, dated February 10, 1498, November 29, 1498, June 1, 1502, January 5, 1506, September 30, 1506, and February 15, 1508.
- (9) Willibald Pirckheimer – Emil Reicke (ed.), *Willibald Pirckheimers Briefwechsel* (Munich, 1940–56), II, pp. 564–67. One letter from Pirckheimer (before September 8, 1515) and one to Pirckheimer, dated September 8, 1515.
- (10) Johann Reuchlin – Ludwig Geiger (ed.), *Johann Reuchlins Briefwechsel* (Tuebingen, 1875), pp. 275–77. One letter to Reuchlin, dated March 30, 1517, and one by Reuchlin, dated June 30, 1517.
- (11) Beatus Rhenanus – A. Horawitz & K. Hartfelder (eds.), *Briefwechsel des Beatus Rhenanus* (Leipzig, 1886), pp. 12–14. One letter to Pico, dated December 31, 1507.
- (12) Jacopo Sadoletto – Jacobi Sadoleti . . . opera quae extant omnia (Vercina, 1737–38), I, pp. 72–73. One letter to Pico, dated July 24, 1530.

C. WORKS DEDICATED TO GIANFRANCESCO PICO

- (1) Urbanus Bellunensis, *Institutiones Graecae grammaticae*. Venice: Aldus, 1497. H 2763 = H 16,098.
- (2) *Commento di Hieronymi Benivieni sopra a piu sue canzone et sonetti dello amore et della bellezza divina*. Florence: Antonio Tubini, Lorenzo di Francesco Veneziano, & Andrea Girlandi, 1500. GKW 3850.

- (3) Lilius Gregorius Giraldus, *Progymnasma adversus literas et literatos*. Printed in Giraldi's *Operum quae extant omnia . . . tomi duo*. Basel: Thomas Guarinus, 1580, II, pp. 422-43.
- (4) Lilius Gregorius Giraldus, *De sepulchris*. Printed in Giraldi's *Operum quae extant omnia . . . tomi duo*. Basel: Thomas Guarinus, 1580, I, pp. 639-66.
- (5) Nicolaus Leonicens, *Libellus de epidemia quam vulgo morbum Gallicum vocant*. Venice: Aldus, 1497. H 10,019 (Reprinted twice before 1500, H 10,018 and H 10,020).
- (6) Iohannis Nesii Florfantini (sic) *oraculum de novo saeculo*. Florence: Laurentius de Morgianis, 1497. H 11,693.
- (7) Ludovicus Bigus Pictorius, *Candida. Hymnus ad Beatam Virginem Mariam*. Modena: Domenico Roccociola, 1491. GKW 4354.
- (8) Ludovicus Bigus Pictorius, *Tumultuaria carmina*. Modena: Domenico Roccociola, 1492. GKW 4355.
- (9) Ludovicus Bigus Pictorius, *Opuscula Christiana*. Modena: Domenico Roccociola, 1496. GKW 4358 (reprinted in 1497, GKW 4359).

SECTION III

MANUSCRIPT SOURCES

Barcelona (Spain)

(1) Biblioteca Universitaria, 391; paper, 16th century, 81 fols. An Italian version of Pico's life of Savonarola in 30 chapters (fols. 1-76).

Benedello (Italy)

(2) Raccolta di Cà d'Orsolino, 1582; paper, 17th and 18th century, 205 fols. A miscellaneous collection of material concerning Mirandola, including an eighteenth century copy of Pico's *Oratio depulsoria calumniae Romaniensis*. Ref.: *Inventari*, vol. LXXII (1940), pp. 67-68.

Bologna (Italy)

(3) Biblioteca Comunale dell'Archiginnasio, A. 169; paper, 18th century, 107 fols. A Latin copy of the life of Savonarola in 32 chapters and the four poems to Savonarola. Ref.: *Inventari*, vol. XXX (1942), p. 79.

(4) Biblioteca Universitaria, 6; paper, 18th century, 158 fols. A miscellaneous manuscript which contains an Italian compendium based on Pico's life of Savonarola (fols. 69r-92r). Ref.: *Inventari*, vol. XV (1909), p. 18.

Bruxelles (Belgium)

(5) Bibliothèque Royale de Belgique, 14,009; paper, 16th or 17th century, 53 fols. An Italian translation of Pico's life of Savonarola in 29 chapters (POK).

(6) Bibliothèque Royale de Belgique, 15,771-15, 813; paper, 1581-84, 6 vols. There are brief excerpt from Pico's *De rerum praenotione* (vol. IV, fols. 150r-153v) copied by Petrus Cornelisson Bockenbergius of Gouda (POK).

El Escorial (Spain)

(7) Real Biblioteca del Escorial, &.IV.18; paper, beginning of the 17th century, 118 fols. A miscellaneous MS. which includes an excerpt from Gianfrancesco Pico's life of his uncle. Ref.: P. Guillermo Antolin, *Catálogo de los Códices Latinos de la Real Biblioteca del Escorial* (Madrid, 1910-23), II, p. 402.

Ferrara (Italy)

(8) Biblioteca Comunale Ariostea, I.396; paper, sixteenth century, 23

fols. The *Carmina* of Ludovicus Bigus Pictorius. Many are addressed to Gianfrancesco Pico. Refs.: Giuseppe Antonelli, *Indice dei manoscritti della Civica Biblioteca di Ferrara* (Ferrara, 1884), p. 191; Kristeller, I, 56.

Firenze (Italy)

(9) Archivio di Stato, Carte Stroziane, Serie I, Filza 137; paper, miscellaneous collection. Included is the first letter of Pico's *De imitatione*, addressed to Pietro Bembo (fols. 66-70). Ref.: *Le carte Stroziane del R. Archivio di Stato in Firenze* (Florence, 1884), I, p. 593.

(10) Archivio di Stato, Bardi III.36; paper, 18th century, unnumbered folios. Pico's life of Savonarola in Italian (in 29 chapters). Ref.: Kristeller, I, 65.

(11) Biblioteca Laurenziana, plut. LXXXIII.19; vellum 16th century, pages unnumbered, illuminated. Gianfrancesco Pico's *De amore divino*, dedicated to Pope Leo X. Ref.: A. M. Bandinius, *Catalogus codicum latinorum Bibliothecae Medicae Laurentianae* (Florence, 1774-8), III, col. 218.

(12) Biblioteca Laurenziana, Acquisti e Doni, 368; paper, 16th century. A miscellaneous MS. dealing with humanism in Cesena. Included are three orations by Julius Budus dedicated to Gianfrancesco Pico, dated 1533 (fols. 57-63). Ref.: Kristeller, I, 103.

(13) Biblioteca Laurenziana, Ashburnham, 279; paper, 16th century, 155 fols. Autograph MS. of the correspondence of Lodovico Nogarola, including a letter from Gianfrancesco Pico to Nogarola, dated July 27, 1531 (fol. 21r) and a copy of Pico's *Pro Dionysio Areopagita . . . Epistola* (fols. 21v-29r). Refs.: Kristeller, I, 84; C. Paoli, *I codici Ashburnhamiani della R. Biblioteca Mediceo-Laurenziana di Firenze* (Rome, 1887 f.), fasc. 5, pp. 334-45.

(14) Biblioteca Laurenziana, S. Marco, 429; paper, 16th and 17th century, 353 fols. A miscellaneous MS. dealing with Savonarola. Included are Pico's four poems to Savonarola (fols. 339-349r) and a short fragment, consisting of the preface and a part of the first chapter, of the life of Savonarola (fols. 351r-353r). Ref.: Kristeller, I, 77.

(15) Biblioteca Marucelliana, A. Conventi Soppressi. 24, paper, 17th century, 527 pages. A miscellaneous MS., containing biographies of famous men of Florence. Included is Pico's life of Savonarola translated into Italian in 30 chapters (pp. 125-208).

(16) Biblioteca Marucelliana, C. 131; paper, 18th century, 50 + 210 fols. A miscellaneous MS., which contains Pico's life of Savonarola in 30 chapters in Italian translation (fols. 1-45 of the first pagination). Ref.: Kristeller, I, 107.

(17) Biblioteca Nazionale, II.II.437; paper, 15th century and later, 113 fols. A miscellaneous MS. dealing with Savonarola. Included is Pico's life of Savonarola in 32 chapters (fols. 13-32). Ref.: *Inventari*, vol. IX (1899), p. 126.

(18) Biblioteca Nazionale, II.III.282; paper, 16th century, 389 pages. A

miscellaneous MS. containing various writings about Savonarola, including an Italian translation of Pico's life of him in 29 chapters (pp. 5-188). Ref.: *Inventari*, vol. X (1900), p. 31.

(19) Biblioteca Nazionale, II.X.162; paper, dated 1675, 30 fols. An Italian compendium based on Pico's life of Savonarola. Ref.: *Inventari*, vol. XII (1902-3), p. 65.

(20) Biblioteca Nazionale, Magl. VII.1024; paper, 16th and 17th century, 211 fols. A miscellaneous MS. of poetry which includes Pico's *Hymnus ad S. Antonium* (fols. 203r-206v).

(21) Biblioteca Nazionale, Magl. IX.96; paper, 17th and 18th century, 312 unnumbered fols. A miscellaneous MS. which contains biographies of various Italians. Included (no.7) is a copy of Pico's biography of Giovanni Pico (14 fols., written in a 17th century hand). Ref.: Kristeller, I, 137.

(22) Biblioteca Nazionale, Magl. XXXV.116; paper, 16th century. A miscellaneous MS., which contains the *Operecta in defensione della opera di Pietro Bernardo da Firenze* . . . (see item 107 of Section II A). Ref.: Kristeller, I, 123.

(23) Biblioteca Nazionale, Magl. XXXV.205; paper, 16th century, 212 fols. A miscellaneous MS. dealing largely with Savonarola. Included is the *Lettera in favore di Hieronymo Savonarola* (fols. 121r-123v) in a copy made about 1500. Ref.: Kristeller, I, 128.

(24) Biblioteca Nazionale, Magl. XXXVII.65; paper, 16th century. A copy of Pico's life of Savonarola in 32 chapters and the poems dedicated to Savonarola. Ref.: Kristeller, I, 123.

(25) Biblioteca Nazionale, Magl. XXXVII.66; paper, 15th century. A miscellaneous MS. which contains part of the four poems dedicated to Savonarola. Ref.: Kristeller, I, 123.

(26) Biblioteca Nazionale, Magl. XXXVII.299; paper, 17th century, 205 unnumbered fols. A copy of Pico's life of Savonarola in 32 chapters. Ref.: Kristeller, I, 123.

(27) Biblioteca Nazionale, Conventi Soppressi, B.VIII.1648; paper, 16th century. An Italian copy of Pico's life of Beata Caterina without the additions of Morelli. Ref.: Kristeller, I, 155.

(28) Biblioteca Nazionale, Conventi Soppressi, F.VII.868; paper, 17th century. An Italian version of Pico's life of Savonarola in 28 chapters. Ref.: Kristeller, I, 150.

(29) Biblioteca Nazionale, Conventi Soppressi, F.IX.869; paper, 17th century. A copy of Pico's life of Savonarola in 32 chapters. Ref.: Kristeller, I, 150.

(30) Biblioteca Nazionale, Conventi Soppressi, J.I.46; paper, 17th century. A miscellaneous MS. of writings dealing with Savonarola. Included is a copy of a letter said to have been found among the belongings of Gianfrancesco Pico, inc: *Alhora comparve un huom* . . .

(31) Biblioteca Nazionale, Conventi Soppressi, J.VII.26; paper, late 16th or 17th century, 122 fols. Pico's life of Savonarola in 32 chapters. Ref.: Kristeller, I, 151.

- (32) Biblioteca Nazionale, Conventi Soppressi, J.VII.31; paper, 16th century. A copy of the life of Savonarola in 32 chapters. Ref.: Kristeller, I, 151.
- (33) Biblioteca Nazionale, Conventi Soppressi, J.VIII.25; paper, 17th century, 116 fols. A miscellaneous MS. of apologies for Savonarola. Included is an Italian summary of Pico's *Opusculum de sententia* (fols. 1r-8r) and a copy of a letter said to have been found among Pico's belongings, inc: All' hora comparve un'huomo . . .
- (34) Biblioteca Nazionale, Fondo Gino Capponi, 166; paper, 16th century, 105 pp. An Italian version of Pico's life of Savonarola in 29 chapters. Ref.: C. Milanese, *Catalogo dei manoscritti posseduti dal marchese Gino Capponi* (Florence 1845), p. 23.
- (35) Biblioteca Nazionale, Fondo Gino Capponi, 324; paper, 16th century, 35 fols. A fragment of an Italian translation of Pico's life of Savonarola (from the middle of chapter 4 to chapter 19). Ref.: C. Milanese, *op. cit.*, p. 110.
- (36) Biblioteca Riccardiana, 383; vellum, 15th century, 53 fols., illuminated. Giovanni Nesi's *Oraculum* dedicated to Gianfrancesco Pico. Ref.: *Inventario e stima della Libreria Riccardi: Manoscritti e edizioni del secolo XV* (Florence, 1810), p. 12.
- (37) Biblioteca Riccardiana, 384; paper, dated September 1, 1496, 78 fols., autograph. Giovanni Nesi's *Oraculum*, dedicated to Pico. Ref.: *Inventario . . .*, p. 12.
- (38) Biblioteca Riccardiana, 420; paper, 15th century, 16 fols., autograph. Gianfrancesco Pico's *Defensio Hieronymi Savonarolae*. Refs.: *Inventario . . .*, p. 13; Kristeller, I, 178.
- (39) Biblioteca Riccardiana, 2051; paper, 16th century, 143 fols. Pico's life of Beata Caterina, in Italian, without the additions of Morelli. Refs.: *Inventario . . .*, p. 43; Kristeller, I, 181.
- (40) Biblioteca Riccardiana, 2053; paper, 16th century, 119 fols. A miscellaneous MS. dealing with Savonarola. Included is Pico's life in 22 chapters (fols. 66r-90r). Refs.: *Inventario . . .*, p. 43; Kristeller, I, 215.
- (41) Biblioteca Riccardiana, 2099; paper, 17th century. An Italian version of the life of Savonarola. Refs.: *Inventario . . .*, p. 44; Kristeller, I, 181.
- (42) Biblioteca Riccardiana, 2130; paper, 17th century, 108 fols. A miscellaneous MS. dealing with Savonarola. Included is Pico's life in Italian in 30 chapters. (fols. 1r-65v).
- (43) Biblioteca Riccardiana, Moreniana, Acquisti Diversi 109; paper, 17th century, 99 fols. Contains Pico's life of Savonarola in 32 chapters (fols. 1-87) and his poems dedicated to Savonarola (fols. 89r-98r). Ref.: Kristeller, I, 111.

Frascati (Italy)

- (44) Archivio della Congregazione di Monte Corona, Liber in folio N.

Primus; paper, 16th century. A MS. containing the writings of Paolo Giustiniani. Included is a letter to G. F. Pico, dated September 14, 1511 (fol. 231) Refs.: Jean Leclercq, *Un humaniste ermite: le bienheureux Paul Giustiniani* (1476-1528) (Rome, 1951), p. 154. Ref.: Kristeller, I, 235.

Graz (Austria)

(45) * Universitätsbibliothek, 920; 16th century. 77 fols. An Italian translation of the life of Savonarola. Ref.: Anton Kern, *Die Handschriften der Universitätsbibliothek Graz* (Vienna, 1956), II, p. 129.

London (England)

(46) British Museum, Sloane 848; paper, 17th century, 32 fols. A brief summary of the life of Giovanni Pico which seems to have been extracted from Thomas More's translation of Gianfrancesco's *Vita* (fol. 12). Ref.: Edward I. L. Scott, *Index to the Sloane Manuscripts in the British Museum* (London, 1904), p. 422.

(47) British Museum, Add. 12,034; paper, 16th century, 234 fols. Contains a single letter from G. F. Pico to Aldo Manuzio, dated September 30, 1506. Ref.: *Catalogue of Additions to the Manuscripts in the British Museum, 1841-1845* (London, 1850), p. 27.

(48) British Museum, Add. 20,064; paper, 17th century, 22 fols. An Italian compendium of Pico's life of Savonarola, not divided into chapters. Ref.: *Catalogue of Additions to the Manuscripts in the British Museum, 1854-1860* (London, 1875), I, p. 35.

(49) British Museum, Add. 23,987; paper, 17th century, 34 fols. An Italian compendium of Pico's life of Savonarola, not divided into chapters. A different version than Add. 20,064. Ref.: *Catalogue of Additions . . . , 1854-1860*, I, p. 927.

Lucca (Italy)

(50) Biblioteca Governativa, 1314; paper, dated 1548, 164 fols. An Italian version of Pico's life of Beata Caterina without the additions of Morelli. Ref.: Kristeller, I, 257.

(51) Biblioteca Governativa, 2566; paper, 16th century, 141 fols. Pico's life of Savonarola in 32 chapters and the four poems to Savonarola. Ref.: A. Mancini, "Index codicum latinorum Publicae Bibliothecae Lucensis," *Studi italiani di filologia classica*, VIII (1900), p. 285.

Marseille (France)

(52) * Bibliothèque de la Ville, 1246; paper, dated 1747-9, 288 fols. A miscellaneous MS. of material concerning Savonarola. Included is the following: "La vie du P. Jérôme Savonarolle (sic) de l'ordre des Frères Prêcheurs, par Jean-François Pic de la Mirandole". Ref.: *Catalogue général des Manuscrits des Bibliothèques Publiques de France: Départements* (Octavo Series), vol. XV (1892), by Albanès, p. 350.

Milano (Italy)

(53) Biblioteca Ambrosiana, E. 30 inf.; paper, late 15th and 16th century, 115 fols. A manuscript of the correspondence of the Manuzio family, including five letters of Gianfrancesco Pico to Aldo Manuzio (fols. 17-21). These are printed in Renouard's edition. See Section II C. Refs.: Ester Pastorello, *L'epistolario manuziano: inventario cronologico-analitico (1483-1597)* (Firenze, 1957), pp. 22-23, 25, 29-31; Kristeller, I, 323.

(54) Biblioteca Ambrosiana, N. 89 sup.; paper, late 16th century, 98 fols. Pico's life of Savonarola in 32 chapters. Ref.: Kristeller, I, 302.

(55) Biblioteca Nazionale Braidense, AD.XI.31; paper, 16th century, 211 fols. A miscellaneous manuscript which contains the correspondence of Alessandro Minuziano. Included are three letters to Gianfrancesco Pico (fols. 149, 155r, 162). Ref.: Kristeller, I, 355.

Modena (Italy)

(56) Biblioteca Estense, Alpha.H.1.10 (Ital. 840); paper, 18th century. A miscellaneous manuscript which contains a copy of Pico's poem *Insulae suae descriptio* (fols. 293r-296v). Ref.: Felice Ceretti, *Descrizione latina dell'isola della Mirandola del Conte Giovanni Francesco II Pico* (Mirandola, 1879), p. 5.

(57) Biblioteca Estense, Gamma.A.3.13 (Campori 173); paper, 16th century, 16 fols. Pico's *Oratio depulsoria calumniae romaniensis*. The last few pages of the MS. are damaged. It is accompanied by a transcription made in 1812. Refs.: L. Lodi, *Catalogo dei codici e degli autografi posseduti dal Marchese Giuseppe Campori* (Modena, 1895), p. 124; Kristeller, I, 387.

(58) Biblioteca Estense, Gamma.U.2.4. (Campori 1905); paper, 17th century, 165 fols. An Italian version of Pico's life of Savonarola. Ref.: R. Vandini, *Appendice seconda al catalogo dei codici e manoscritti posseduti dal Marchese Giuseppe Campori* (Modena, 1894), p. 571.

München (Germany)

(59) Bayrische Staatsbibliothek, codex latinus 434; paper, dated 1500, illuminated. A miscellaneous MS. which includes Pico's *Opusculum de sententia* (fols. 113r-146v) and his *Defensio Hieronymi Savonarolae* (fols. 184r-214r). Ref.: *Catalogus codicum latinorum Bibliothecae Regiae Monacensis*, 2nd ed., (Munich, 1892-94), I, part I, pp. 118-19.

(60) Bayrische Staatsbibliothek, codex latinus 953; paper, 16th century, 70 fols. Miscellaneous MS. containing a letter from Gianfrancesco Pico to Willibald Pirckheimer (fols. 64r-65v), dated December 14, 1502. Ref.: *Catalogus . . . Monacensis* (2nd ed.) I, part I, p. 215.

(61) * Bayrische Staatsbibliothek, codex latinus 4008; paper, 16th century, 42 fols. A miscellaneous MS. which includes a letter from G. F. Pico to Conrad Peutinger. Ref.: *Catalogus . . . Monacensis* (2nd ed.) I, part II, p. 157.

(62) Bayrische Staatsbibliothek, codex latinus 11,804; paper, 16th century, 116 fols. A miscellaneous MS. which contains Pico's *Staurostichon* (fols. 93r-108r) and his *Hymnus ad SS. Trinitatem* (fols. 109r-116r). There are

marginal and interlinear notations. Ref.: *Catalogus . . . Monacensis* (1st ed.; 1868–81), II, part, p. 41.

(63) Universitätsbibliothek, 2^o.682; paper, early 16th century, 424 fols. This is a miscellaneous manuscript containing both early Christian writings and works of fifteenth and sixteenth century authors. There are ample marginal and interlinear annotations. Included are Pico's *De studio* (fols. 321r–355r; at the end we read, "finis secundus liber Joannis Francisci Pici in vigilia S. Pelagii anno 1513."), a letter from Gianfrancesco to Giovanni Pico (329v) and one from Giovanni to Gianfrancesco (392v–394v). (POK).

Napoli (Italy)

(64) * Biblioteca Nazionale, VII.G.62; paper, 16th century. A miscellaneous MS. which includes Gianfrancesco Pico's *Responsio ad Antonium Faventinum* (fols. 85v–88). This is probably the *Defensio de uno et ente*. Ref.: Kristeller, I, 423–24.

(65) * Biblioteca Nazionale, Brancacciano, I.D.5; paper, 16th century, in two parts (104 + 58 fols.). A miscellaneous MS. which includes an Italian version of Pico's life of Savonarola in 29 chapters (fols. 1–35 of the first part). Refs.: Alfonso Miola, *Catalogo topografico-descrittivo dei manoscritti della R. Biblioteca Brancacciana di Napoli* (Napoli, 1918), pp. 93–96; Kristeller, I, 435.

(66) * Biblioteca Nazionale, già Viennesi, Lat. 62; paper, 16th century, 109 fols. A miscellaneous MS. containing Pico's life of Savonarola. Refs.: Emilio Martini, "Sui codici napoletani restituti dall'Austria", *Atti della Reale Accademia di archeologia, lettere, e belle arti* (Napoli), new series, IX (1926), p. 180; Kristeller, I, 437.

Nürnberg (Germany)

(67) Stadtbibliothek, Nachlass Pirckheimer, 485; paper, 16th century. The correspondence of Willibald Pirckheimer, including three letters from Gianfrancesco Pico. All have been printed. (POK).

Osimo (Italy)

(68) * Biblioteca del Collegio Campana, 20; 17th century. An Italian version of Pico's life of Savonarola. Ref.: *Inventari*, vol. VI (1896), p. 10.

Paris (France)

(69) Bibliothèque Mazarine, 1926; paper, 17th century, 428 numbered pages and some unnumbered ones. A miscellaneous MS. of writings concerning Savonarola, which comes from the collection of J. Quétif. Included are Pico's life of Savonarola in Italian translation (pp. 329 [misnumbered 429]–427), some of his poems dedicated to Savonarola (p. 428), and a brief fragment from the *Defensio Hieronymi Savonarolae* (on an unnumbered page near the end). Ref.: A. Molinier, *Catalogue des Manuscrits de la Bibliothèque Mazarine* (Paris, 1886) II, pp. 285–86.

(70) Bibliothèque Nationale, latin 15, 072; paper, 16th century, 69 fols.

Contains Pico's life of Savonarola in Latin in 32 chapters (fols. 2r-64v) and one of the poems dedicated to Savonarola (fol. 65r).

Perugia (Italy)

(71) Biblioteca Comunale Augusta, F.8; paper, 15th and later centuries, 66 fols. Pico's life of Savonarola. It breaks off in the middle of chapter 31. Ref.: *Inventari*, vol. V (1895), p. 118.

(72) * Badia di San Pietro, C.M.45; dated 1556. Pico's life of Beata Caterina in Italian (POK).

Pesaro (Italy)

(73) * Biblioteca Oliveriana, 313; paper, 18th century, 471 fols. A miscellaneous MS. which contains Book I of Pico's *De auro*. Ref.: *Inventari*, vol. XXXIII (1925), p. 77.

Roma (Italy)

(74) Biblioteca Casanatense, 2672; paper, 16th and 17th century. A miscellaneous manuscript of correspondence between the Roman Curia and the European courts. Included is a copy of Pico's *De reformatendis moribus*, written in an early 16th century hand (fols. 375r-383v). Ref.: L. Pastor, *Storia dei papi*, Italian trans., new ed., (Rome, 1958f.), III, p. 5.

(75) Biblioteca Nazionale, Vittorio Emanuele, 1017; paper, dated 1524, 47 fols. A collection of poems by Gianfrancesco Pico. Included are (1) *Ad S. Martinum* (fols. 11r-5r), (2) *Ad S. Mariam Magdalenam* (5v-10v), (3) *Ad S. Antonium* (11r-16r), (4) *Ad S. Franciscum* (16v-20v), (5) *Ad Angelum Custodem* (21r-24r), (6) *In S. Paulum Apostolum* (24v-30r), (7) *Ad Io. Baptistam et Evangelistam* (30v-35v), (8) *Ad S. Prophetam Davidem* (36r-40r), (9) letter by Gianfrancesco Pico to his son Giantommaso, inc: *Superioribus diebus . . .* (41r-41v), (10) *Insulae suae descriptio* (42r-47v). Refs.: Giovanni Andres, *Catalogo de' codici manoscritti della famiglia Capilupi di Mantova* (Mantua, 1797), p. 225; Tullia Gasparini Leporace, "I manoscritti capilupiani della Biblioteca Nazionale Centrale di Roma", *R. Istituto storico italiano per il medio evo. Guida storica e bibliografica degli archivi e delle biblioteche d'Italia*, V (1939), pp. 20-21.

(76) Biblioteca Nazionale, S. Gregorio, 16; paper, 18th century, 107 fols. A manuscript containing various writings of Girolamo Rorario. Included is a letter to G. F. Pico, inc: *Fortunam plurimum . . .* (fols. 10v-11r) and a dialogue entitled *Fortuna*, dedicated to Pico (11r ff.) (POK).

(77) Biblioteca Nazionale, Sessoriano, 151; vellum, 16th century, 13 fols. illuminated. A de luxe dedication copy of Pico's *De appetitu primae materiae*. (POK).

(78) Biblioteca Vallicelliana, C.56; paper, 16th century and later, 230 fols. A miscellaneous MS. which includes a Latin copy of Pico's life of Savonarola (fols. 6r-56r). It seems to be from the sixteenth century and has 32 chapters. (POK).

(79) Convento di S. Sabina, X.664; paper, 16th century, 198 + 24 un-

numbered fols. A copy of Pico's life of Beata Caterina, which includes the additions of Morelli. Ref.: Amedeo, p. 85.

(80) Convento di S. Sabina, XIV.284; paper, 15th-18th century. A miscellaneous MS. mostly relating to Savonarola. Included is a copy of Pico's *Opusculum de sententia* in 15 fols.

Siena (Italy)

(81) Biblioteca Comunale, K.IV.33; paper, 18th century, 231 fols. A miscellaneous manuscript which contains Pico's life of Savonarola in 32 chapters (fols. 1-64). (POK)

(82) Biblioteca Comunale, K.IV.34; paper, 16th century, 85 fols. A copy of Pico's life of Savonarola in 32 chapters. (POK).

Torino (Italy)

(83) * Biblioteca Nazionale, H.VI.10; paper, 16th century, 184 fols., slightly damaged by fire. A Latin copy of the life of Beata Caterina with the additions of Morelli. Refs.: *Analecta Bollandiana*, XXVIII (1909), p. 443; *Inventari*, vol. XXVIII (1924), p. 135.

Toulouse (France)

(84) * Bibliothèque Municipale, 832; paper, 16th century, 198 fols., written in an Italian hand. A miscellaneous MS. concerning Savonarola. Included are Pico's four poems to him. (fols. 109-29). Ref.: *Catalogue général des Manuscrits des Bibliothèques Publiques des Départements* (Quarto Series), vol. VII (1885), p. 483.

Vaticano, Città del

(85) Vaticano latino, 2847; paper, 14th-16th century. A miscellaneous MS of different periods and materials. Included is the first letter of the *De imitatione* (fols. 176-179) in a sixteenth century copy. Ref.: Santangelo, p. 20.

(86) Vaticano latino, 3735; vellum, dated 1524, 30 fols., with gold initials. Gianfrancesco Pico's *Dialogus de adoratione* (POK).

(87) Vaticano latino, 4723; paper, 16th century, 59 fols. Contains a copy of Pico's life of Savonarola in 32 chapters (fols. 1r-54r). Ref.: B. Montfaucon, *Bibliotheca Bibliothecarum Manuscriptorum Nova* (Paris, 1739) I, p. 116c.

(88) Vaticano latino, 5171; paper. A miscellaneous MS. of poetry. Included is a single four-line poem attributed to G. F. Pico, inc: Sanguine si princeps ... (fol. 59v) (POK).

(89) Vaticano latino, 5426; paper, 16th and 17th century, 517 fols. A miscellaneous MS. which includes a copy of Pico's life of Savonarola in 32 chapters (fols. 1-43r) (POK).

(90) Vaticano latino, 6216; paper, 16th century. A miscellaneous MS. which includes Pico's letter in defense of Dionysius (fols. 406r-414r) (POK).

(91) Vaticano latino, 7507; paper, 18th century. A miscellaneous MS. which contains a brief fragment of one of Pico's writings in defense of Savonarola (fols. 348r-349v).

(92) Vaticano latino, 11,556; vellum, dated 1534, 20 fols. Contains the wills of Giovanna Carafa Pico (1r-3r) and of Gianfrancesco Pico (3r-19v). Ref.: José Ruysschaert, *Codices vaticani latini: codices 11,414-11,709* (Vatican City, 1959), pp. 297-98.

(93) Fondo Barberini latino, 1868; paper, 16th century. A miscellaneous MS. which contains Pico's hymns *Ad Trinitatem* (fols. 14r-20v) and *Ad Virginem* (fols. 20v-23v) (POK).

(94) Fondo Barberini latino, 2252, paper, 17th century, 138 fols. A copy of Pico's life of Savonarola in 32 chapters (1-134v) and a part of his four poems to Savonarola (fols. 135r-138r) (POK).

(95) Fondo Capponi, 235; paper, 16th century. A miscellaneous MS. of letters written in different hands. Included are four letters from Battista Mantovano to G. F. Pico (fols. 146v-148r). One of these, inc: *Meas pollicitationis* . . ., dated February 23, 1495, appears to not have been printed. Ref.: G. Salvo Cozzo, *I codici capponiani della Biblioteca Vaticana* (Rome, 1897), pp. 308-22.

Venezia (Italy)

(96) Biblioteca Marciana, III, 70 (2620); paper, 16th century, 535 fols. A miscellaneous manuscript of philosophical and theological questions, written in many different hands. There are several mentions of Gianfrancesco Pico and discussions of some of his teachings (e.g. fols. 271-437 *passim*). Ref.: Giuseppe Valentinelli, *Bibliotheca manuscripta ad S. Marci Venetiarum* (Venice, 1868-73), II, p. 109.

Vicenza (Italy)

(97) Biblioteca Bertoliana, 487; paper, late 15th-early 16th century, 171 fols. A collection of the writings of Bartholomeus Paiellus (Pagello). Included is an *Apologia qua et amor et elegiarum scriptores non modo sed commendatur*, directed to Gianfrancesco Pico (fols. 122r-127v). Ref.: *Inventari*, vol. II (1892) by Mazzatinti, p. 77.

Washington (United States)

(98) (F) Folger Library, V.a.123; paper, 16th century, 313 fols. A miscellaneous MS. from Ferrara which contains the following writings of G. F. Pico: (1) *De falsitate astrologiae in genethliacorum confutatio* with a preface to Giovanni Manardo (fols. 3r-12v), (2) *Ad S. Martinum* (269r-272v), (3) *Ad S. Antonium* (273r-275r), (4) *Ad S. Franciscum* (275v-277r), (5) *Ad Angelum Custodem* (277v-278v), (6) *Ad S. Paulum Apostolum* (278v-281v), (7) *Ad David* (281v-283r), (8) *Ad Johannem Baptistam* (283v-285v) (POK).

Wien (Austria)

(99) * Österreichische Nationalbibliothek, 5883; paper, 16th century, 109 fols. A miscellaneous MS. regarding Savonarola which includes "aliqua notabilia ex gestis fratris Hieronymi Savonarolae (fols. 1r-28r)" by G.F. Pico *Tabulae codicum manuscriptorum praeter graecos et orientales in Bibliotheca Palatina Vindobonensi asservatorum* (Vienna, 1864-1912), IV, pp. 215-16.

SECTION IV

SELECTED SECONDARY SOURCES

- (1) *Bartolus, Richardus*. In Joannem Franciscum Picum praeclari ingeniorum Phoenicis nepotem . . . allocutio. Bologna: 1793, 54 pp. A general monograph on Gianfrancesco Pico, somewhat outdated, but still useful. Copies of this rare book are in the British Museum and in the Biblioteca Universitaria in Bologna.
- (2) *Bodin, Jean*. De la Demonomanie des Sorciers . . . Paris: 1580, fol. 209 et passim. Gives some consideration to Pico's attitude toward astrology and the occult sciences.
- (3) *Camerini, Eugenio*. Nuovi profili letterari. Milan: 1876, vol. IV, pp. 86-92. A brief discussion of Pico's dialogue *La strega*.
- (4) *Cantimori, Delio*. Eretici italiani del Cinquecento; ricerche storiche. Florence: 1939, pp. 5-9. Discusses Pico's religious views as compared with those of other Italians of his time.
- (5) *Colomesius, Paulus*. Italia et Hispania Orientalis . . . Hamburg: 1730, pp. 46-51. Quotes a number of sixteenth century authors on Gianfrancesco Pico.
- (6) *Farner, Oskar*. Huldrych Zwingli, seine Entwicklung zum Reformator 1506-1520. Zurich: 1946, II, pp. 122, 136. On Zwingli's use of Pico's writings.
- (7) *Giovanni, Vincenzo di*. Giovanni Pico della Mirandola nella storia del Rinascimento e della filosofia in Italia. Mirandola: 1899, pp. 198-209. A general summary of the life and works of Gianfrancesco Pico is added.
- (8) *Harvey, Gabriel*, in *A. B. Grosart* (ed.). The Works of Gabriel Harvey D. C. L. London: 1884, vol. I, pp. 64f. Reprint of a letter to Edmund Spenser from Three proper and witty Familiar Letters, London: 1580, in which the *De Rerum praenotione* is discussed. Gianfrancesco Pico is confused, however, with his uncle.
- (9) *Hoenigswald, Richard*. Denker der Italienischen Renaissance. Basel: 1938, pp. 39f. A discussion of Gianfrancesco's critique of the Aristotelian epistemology in which the difference in outlook between Gianfrancesco and his uncle is recognized.
- (10) *Imbart de la Tour, P.* Les origines de la Réforme. Paris: 1905 f., II, pp.

400-04, 413-14, 568-72, et passim. Several of Pico's works are briefly discussed in the context of the religious controversies of the times.

(11) *Koehler, Walter*. "Huldrych Zwingli's Bibliothek," *Neujahrsblatt zum Besten des Waisenhauses Zürich für 1921*, no. 84, pp. *31, *43. On Zwingli's use of Pico's writings.

(12) *Maini, Luigi*. "Di un opuscolo di Gianfrancesco Pico stampato alla Mirandola, in 1519," *Annuario storico modenese*. Modena: 1851, pp. 167-91. Discusses the first printing of the *De veris calamitatum causis* . . . There is also a discussion of the work itself and excerpts from it are printed.

(13) *Mazonius, Jacobus*. *De triplici hominum vita, activa nempe, contemplativa, et religiosa methodi tres* . . . Cesena: 1577, fol. 362r. Thesis 4612 discusses an opinion of Pico's concerning Divine Providence.

(14) *Niceron, J. P.* *Memoires pour servir à l'histoire des hommes illustres* . . . Paris: 1729-45, XXXIV, pp. 147-56. A general survey of Pico's life and works.

(15) *Papadopolus, Nicolaus*. *Historia gymnasii Patavini*. Venice: 1726, II, p. 42. Inaccurately contends that Gianfrancesco Pico attended the University of Padua. This has led later scholars to the same error (e.g. Hans Rupprich, *Willibald Pirckheimer und die erste Reise Duerers nach Italien*. Vienna: 1930, pp. 18 et passim).

(16) *Picciolus, Antonius*. *De manus inspectione libri tres*. Bergamo: 1587, preface and fol. 3v. A brief consideration of Pico's attitude toward occultism.

(17) *Pusino, Ivan*. "Ein neues Dokument zur Geschichte Savonarolas," *Zeitschrift für Kirchengeschichte* XLIII (1924), pp. 159-68. Attempts to attribute an anonymous defense of Savonarola to Gianfrancesco Pico. This attribution is contested by Schnitzer (in "Ein neues Dokument . . ." in *Z.F.K.G.*, XLIX (1930), pp. 336-42).

(18) *Saitta, Giuseppe*. *Il pensiero italiano nell'Umanesimo e nel Rinascimento*, 2nd. ed., Florence, 1961, I, pp. 635-43. A general survey of Pico's thought and an analysis of some of his most characteristic opinions.

(19) *Santangelo, Giorgio*. *Il Bembo critico e il pensiero d'imitazione*. Florence: 1950, pp. 59-87. A detailed discussion of the Pico-Bembo controversy on imitation.

(20) *Santangelo, Giorgio*. "La polemica fra Pietro Bembo e Gian Francesco Pico intorno al principio d'imitazione," *Rinascimento* I (1950), pp. 323-39. Contains basically the same material as does the introduction to Santangelo's edition of the *De imitatione*.

(21) *Sirenus, Iulius*. *De fato libri novem* . . . Venice: 1563, fols. 62r, 74v-75r. Considers Pico's critique of the Aristotelian rejection of Divine Providence.

(22) *Thorndike, Lynn*. *A History of Magic and Experimental Science*. New York: 1923-58, V, pp. 121-2, 164, 540-1; VI, pp. 467f., 503. Discusses the various works in which Pico considers the occult sciences. Also gives some attention to his sources and influences in these matters.

- (23) *Tiraboschi, Girolamo*. Storia della letteratura italiana, new edition. Venice: 1822-25, VII, pp. 600-06. A general survey, less detailed than the same author's *Biblioteca modenese*.
- (24) *Trinkaus, Charles E.* Adversity's Noblemen. New York: 1940, pp. 130-32. Discusses the *De veris calamitatum causis* in relation to other prophetic literature at the end of the fifteenth and beginning of the sixteenth centuries.
- (25) *Walker, D. P.* Spiritual and Demonic Magic from Ficino to Campanella. London: 1958, pp. 146 f. *et passim*. Discusses Pico's attitude toward occultism in the context of that of his contemporaries.
- (26) *Wier, Joannes*. De praestigiis daemonum et incantationibus ac veneficiis libri sex . . . Basel: 1583, p. 5, cols. 147-49, 155, 159-60, 213, 359-60, *et passim*. Makes use of Pico's *De rerum praenotione*.
- (27) *Wind, Edgar*. Pagan Mysteries in the Renaissance. New Haven: 1958, pp. 45-58. Treats Pico's opinion toward occult science and magic.
- (28) *Zimmels, B.* Leo Hebräus ein jüdischer Philosoph der Renaissance: sein Leben, seine Werke und seine Lehren. Breslau: 1886, pp. 27-28. A not entirely accurate discussion of Pico's relation to Leone Ebreo.

APPENDIX B

A COMPARISON OF GIANFRANCESCO PICO'S
TRANSLATION OF SEXTUS EMPIRICUS'
OUTLINES OF PYRRHONISM WITH
HENRI ESTIENNE'S TRANSLATION

Section I: Outlines of Pyrrhonism, I, 14, sections 36-37 (Loeb ed., p. 24).

Gianfrancesco Pico, *Examen Vanitatis*, II, 21; from the *Opera* (Basel, 1601), p. 560.

Primus itaque authore Sexto pertinebat ad animalium differentias. Secundus ab hominum diversa natura sive habitudine varia sumebatur. Tertius excipiebatur differentibus affectibus seu praeparationibus quae in sensoriis inveniuntur. Quartus a circumstantiis et dispositionibus manabat. Quintus a positu rei vario, a loco, et locorum intercapedine pendebat. Sextus a mixtione trahebatur. Septimum quantitas et praeparatio subiecti constituebat. Octavus de iis quae sunt ad aliquid sive de relatione sumebatur. Noni rarae vel frequentes aggressiones fecere vocabulum. Decimum variae disciplinae, diversi mores, differentes leges, fabulosae narrationes, opiniones, et coniecturae philosophorum dissidentes, constituerunt.

Henri Estienne's translation from *Sexti Empirici Opera quae extant* (Paris-Geneva, 1621). p. 9.

Primus ex animalium varietate. Secundus ex hominum differentia. Tertius ex diverse constitutis sensuum instrumentis. Quartus ex vario habitu. Quintus ex positionibus et intervallis ac locis. Sextus ex permistionibus. Septimus ex quantitativis et constitutionibus subiectorum. Octavus ex eo quod ad aliquid refertur. Nonus ex iis quae frequentur aut raro contingunt. Decimus ex institutis, consuetudinibus, et legibus, fabulosisque persuasionibus, et dogmaticis opinionibus.

Section II: Outlines of Pyrrhonism, I, 14, sections 44-45 (Loeb ed., pp. 26-28).

Gianfrancesco Pico, *Examen Vanitatis*, II, 22; from the *Opera* (Basel, 1601), pp. 561-62.

Enimvero principalium corporis partium tantam diversitatem, maximeque in sensu: num parituram putaverimus magnam nobis sive visorum sive phantasmatum diversitatem? Num et magnum praebituram momentum et in assensu cohibendo et in opponendo censibimus? Qui enim sunt icterici pallore circumfusa putant, quae nobis alba videntur, et iis qui rubore sunt et sanguine oculos infecti, sanguinae praesentantur, quae nobis alba. Quoniam vero inter animantes inveniuntur qui pallentes et affectos colore subviridi habent oculos et qui sanguineos et qui subalbidos et qui alio colore suffusos, consentaneum est differentum apud illos colorum conceptum fieri. Ad haec si oculos intendamus in solem perseveremusque mox eos ipsos vergamus in librum aureae videbuntur literae et in gyrum commotae. Praeterae cum animantes quaequam suapte natura lampada quamquam gestare videantur in oculis, ita ut appareant lucem fundere subtilem et facile missilem nocturasque tenebras effugantem, iniuriane putabimus, non illis ac nobis, quae extrinsecus in pupillas incidunt, formas similes videri?

Henri Estienne's translation from *Sexti Empirici Opera quae extant* (Paris-Geneva, 1621), p. 10.

Sed et differentia praecipuarum corporis partium earumque potissimum quae a natura ad diiudicandum et sentiendum datae sunt, maximum potest excitare phantasiarum discordiam pro animalium varietate. Exempli gratia, icterici pallida esse dicunt quae nobis alba videntur: et qui hyposphagma habent, sanguinea. Quoniam igitur animalium etiam alia pallidos habent oculos, alia sanguinis colorem referentes, alia albicantes, alia alium colorem habentes: non sine causa diverso modo colores percipiunt. Quinetiam nos si diutius defixos habuerimus in solem oculos, deinde in librum eos demittamus, aureae nobis literae videntur esse et in orbem circumagi. Quandoquidem igitur aliqua etiam animantia fulgorem quendam in oculis habent et lumen tenue et versatile ex eis emittunt, adeo ut etiam noctu cernant: merito existimemus non similia nobis et illis externa sub sensum cadere.

Section III: Outlines of Pyrrhonism, I, 14, sections 81-83 (Loeb ed. p. 48).

Gianfrancesco Pico, *Examen Vanitatis*, II, 23; from the *Opera* (Basel, 1601), p. 565.

Anus Attica etiam triginta sine vitae incommodo pertulit, eodem Sexto autore, et Alexandri minister quidam praefectus mensis nomine Demophon, in sole balneoque rigeat et aestuabat in umbra; ac ut Psillos mittam Aphricae populos qui a serpentibus et aspidibus icti non pereunt. Argivus Athenagoras a phalangis et scorpionibus percussus nihil dolebat; qui Tintytae dicuntur incolae Aegypti inter crocodylos impune versantur. Est et

quaedam Aethiopum gens ex adverso Meroes, adusque fluvium Hydaspem protenta, qui absque ullo periculo et scorpiones et aspides et caetera id genus serpentia comedunt, non solum non laeduntur ab eis, quod etiam admitteret Aristoteles qui scribit in octavo de historia animalium in Pharo et locis aliis scorpiones non laedere.

Henri Estienne's translation from *Sexti Empirici Opera quae extant* (Paris-Geneva, 1621), p. 17.

Quinetiam fuisse aiunt anum quandam Atticam, quae cicutae triginta holcas sine damno sorberet; Lysis autem etiam succi papaveris quatuor holcas nulla cum molestia hauriebat. Et Demophon quidem, qui Alexandro mensae structor erat, quum ad solem stabat aut in balneo erat, algebat; in umbra autem calescebat. Athenagoras autem Argivus nullum ex scorpionum et araneorum ictu dolorum sentiebat. Quinetiam ii qui Psylli vocantur, ne si a serpentibus quidem aut etiam aspidibus mordeantur, laeduntur. At Tintyritae Aegyptiorum crocodilorum. Sed et Aethiopes illi qui adverso Meroes habitant, Hydaspis fluvii accolae, scorpiones et serpentes, et huius generis alia citra periculum comedunt.

APPENDIX C

DID GIANFRANCESCO PICO INFLUENCE
AGRIPPA?

The question of what if any influence Gianfrancesco Pico's *Examen Vanitatis* (1520) had on Cornelius Agrippa von Nettesheim's *De incertitudine et vanitate scientiarum* (1526) is not easy to answer. There are certainly similarities between the two works. Both attack many of the same arts and sciences as being useless for the attainment of truth; both express similar tendencies toward scepticism. There also seem to be close parallels between the attitudes expressed toward Christian religion, although Pico seems to have been perhaps a little more insistent in his separation of faith from reason and to have been somewhat more decided in his emphasis on the superiority of religion over rational knowledge.

The thesis of Villey, recently supported by Paola Zambelli, argues that there is clear evidence that Agrippa knew Pico's work well and drew a number of key teachings from it.¹ Although I should not want to rule out the possibility of Agrippa's having been influenced by Pico's *Examen Vanitatis*, I must say that in my opinion the evidence which has thus far been produced in favor of the thesis is not convincing. One certainly finds passages in Agrippa which closely approximate similar ones in Pico.² Both emphasize that the human arts and sciences are all too susceptible to error, whereas faith provides the unique road to truth.³

Agrippa's work resembles Pico's enough that we might raise the question

¹ Pierre Villey, *Les sources et l'évolution des essais de Montaigne* (Paris, 1908), II, p. 166; Paola Zambelli, "A proposito del 'de vanitate scientiarum et artium' di Cornelio Agrippa," *Rivista critica di storia della filosofia*, XV (1960), pp. 166-80.

² For example the following passages should be compared: *De incert.*, I, pp. 1-6 and *Ex. van.*, V, *peroratio*, pp. 759-60; *De incert.*, 7, p. 27 and *Ex. van.*, IV, 12, esp. p. 687; *De incert.*, *operis peroratio*, pp. 245-47 and *Ex. van.*, VI, 21, pp. 813-14.

Agrippa's work is cited from *Henrici Cornelii Agrippae ab Nettesheym . . . Opera* (Lyon: per Beringos fratres, n.d., but this imprint is false), II, pp. 1-247. All further references are to this edition. For a summary of some of Agrippa's doctrines which closely approximate some of Pico's see George H. Daniels, Jr., "Knowledge and Faith in the Thought of Cornelius Agrippa," *Bibliothèque d'Humanisme et Renaissance*, XXVI (1964), pp. 326-40, esp. 328-32.

³ "Tanta autem est veritatis ampla libertas liberaque amplitudo, ut nullius scientiae speculationibus, non ullo sensuum urgenti iudicio, non ullis logici artificii argumentis, nulla probatione evidente, nullo syllogismo demonstrante, nec ullo humane rationis discursu possit deprehendi, nisi sola fide." Agrippa, *op. cit.*, I, p. 5. "Unde fidei praecllementia supra sensilem cognitionem sese exerit ac multo etiam clarius . . ." Pico, *Ex. van.*, V, 10; p. 742.

of whether there is in fact a relation between them. On the other hand, there are strong reasons to question whether there was any influence. It seems strange, for example, that Agrippa never once cites the name of Sextus Empiricus, whereas Pico not only cites him often, but translates whole sections of his *Outlines of Pyrrhonism* for inclusion in his own work. This is not because Agrippa is bashful about citing ancient authors, for he mentions them by the dozen. This seems to me to be a decisive element which would allow us to determine for sure that Agrippa was acquainted with the *Examen Vanitatis*. Sextus Empiricus was almost wholly unknown when Pico introduced his name and doctrines to the Western intellectual world in 1520; ⁴ it would seem likely that a "sceptic" like Agrippa would focus upon the new source material introduced by Pico. At any rate, he does not appear to have known Sextus, although he refers to the "Pyrrhonists" and "Academics" in his work.⁵

Villey bases his conclusion regarding Pico's alleged influence on Agrippa on the similarity between several parallel chapters of their respective works.⁶ The same judgment was repeated by Miss Zambelli, but, again like Villey, she did not give us an analysis of the chapters upon which her conclusion is based.⁷ In the hope of uncovering some decisive information regarding the question at hand, I have carefully compared portions of Pico's (I, 14) and Agrippa's (52) chapters concerning the opinions of various philosophers regarding the soul. A cursory examination indicates that the two cover somewhat the same ground; both contend that we have no certainty regarding many questions about the soul, since the philosophers themselves have been in serious disagreement on this issue. In substantiating this argument they both cite the opinions of various earlier philosophers on the question of what is the precise part of the body in which the human soul resides.⁸ Both Pico and Agrippa list numerous philosophers' opinions on this point. Moreover, the list of ancient philosophers cited is nearly identical in each, indi-

⁴ Richard H. Popkin, *The History of Scepticism from Erasmus to Descartes* (Assen, 1960), pp. 17, 20.

⁵ On Agrippa's sceptical tendencies see Auguste Prost, *Les sciences et les arts occultes au XVIe siècle: Corneille Agrippa, sa vie et ses oeuvres* (Paris, 1881-82), I, pp. 90-117; Giuseppe Rossi, *Agrippa di Nettesheim e la direzione scettica della filosofia nel Rinascimento* (Turin, 1906); Popkin, *op. cit.*, pp. 22-25; Zambelli, *op. cit.*; Daniels, *op. cit.*, and Charles G. Nauert, Jr., *Agrippa and the Crisis of Renaissance Thought* (Urbana, 1965). The latter came out too late to be fully utilized in this study. The *Academici* and *Pyrrhonici* are both cited by Agrippa at I, p. 5.

⁶ "Corneille Agrippa fait des emprunts à Pic . . . Qui voudra se reporter dans le 1^{er} livre l'*Examen vanitatis*, au chap. 14 et surtout au chap. 16, trouvera des phrases qui prouvent d'abord la dette d'Agrippa envers Pic de la Mirandole." *op. cit.*, II, p. 166n.

⁷ "E a confermare questo vecchio giudizio [of Morhof] basterà tener presenti i riecheggiamenti fedeli, e quasi i plagi, che per le parti teorico-metafisiche la indebitano all' *Examen vanitatis doctrinae gentium* di Gian Francesco Pico, da cui son tratti per intero i capitali sull'anima e sulla metafisica, con i loro elenchi di opinioni contrastanti . . ." *op. cit.*, p. 179. She then cites chaps. 52 and 53 of Agrippa's work and the same chapters of Pico's work which Villey had cited (I, 14 and 16).

⁸ Pico, *Ex. van.*, I, 14, pp. 512-16, esp. pp. 515-16; Agrippa, *De incert.*, 52, pp. 85-90, esp. p. 86.

cating the possibility that Agrippa may have drawn from Pico. An important point, however, which both Villey and Zambelli seem to have overlooked is that the *content* of Pico's and Agrippa's analyses must be taken into consideration. Let us for a moment compare what doctrines the two sixteenth century sceptics attribute to the ancient philosophers in question. Both cite the opinions of approximately fifteen ancients regarding the *sedes animae*. What they have to say about approximately half of these authors is in general agreement. What they say about the others is almost in direct contradiction. In Pico we find the following set of attributions:

Democritus, Hippocrates, Plato eam in cerebro collacarunt . . . Hierophilus in cerebri concavo . . . Empedocles et Aristoteles in corde. Stoici itidem in corde vel in spiritu circum cor.⁹

Agrippa has the following to say on the same subject:

Hippocrates et Hierophilus in cerebri ventriculis illam ponunt . . . Democritus in toto corpore . . . Stoici cum Chrysippo in toto corde ac spiritu circa cor versante . . . Empedocles in sanguine . . . Plato et Aristoteles et reliqui nobiliores philosophi in toto corpore.¹⁰

Even allowing for some originality on Agrippa's part, one can scarcely believe that this information was drawn from Pico. "Quasi i plagi," as Miss Zambelli contends? Hardly! Moreover, Pico's chapter 16 of Book I,¹¹ a long biological discussion of the human body with an extensive section on human generation apparently finds no equivalent in Agrippa's work.¹²

As I have indicated, I am not saying with certainty that Pico's *Examen Vanitatis* had no influence whatever on Agrippa's *De incertitudine*. Rather, I suspend my judgment and wait for convincing evidence to be produced by those who feel that there was a definite influence. Pico's distinctive contributions to sixteenth century philosophical discussions are nowhere in evidence in Agrippa's work. Pico devotes a significant portion of the *Examen Vanitatis* to refuting certain Aristotelian doctrines of natural philosophy.¹³ Agrippa hastily covers the topic of natural philosophy in less than two pages,¹⁴ and he does not mention the names of the two chief critics of Aristotle of whom Pico made such abundant use, John Philoponus and Hasdai Crescas,

The conclusion must be that I am still unconvinced of the purported influence of Pico on Agrippa. The similarities between their writings perhaps stem from several common sources.¹⁵ After all, attacks on reason with

⁹ p. 515.

¹⁰ p. 86. We have omitted here in the quotations of both Pico and Agrippa the attributions of doctrines on which there is general agreement. By the citations we mean to emphasize the very real differences between their treatments of the same material.

¹¹ pp. 520-27.

¹² Villey (II, p. 166) cites this chapter as one of the connecting points between Pico and Agrippa; Zambelli repeats this opinion (see above n. 7). It is also puzzling how Miss Zambelli places importance on Agrippa's brief chapter 53, "De metaphysicis" (*ed. cit.*, II, pp. 90-92), which does not seem to have any distinguishing elements which would indicate the influence of Pico.

¹³ Esp. *Ex. van.*, VI, 2-7, pp. 764-74.

¹⁴ *De incert.*, 49-50, pp. 82-84.

¹⁵ I would be much more inclined to single out passages such as the following to indicate a possible influence by Pico: "Omnis etiam notitia (ut aiunt) ortum habet a sensibus et ex-

an emphasis on faith were not uncommon at the end of the fifteenth and beginning of the sixteenth centuries. One thinks immediately of Savonarola, Adriano da Corneto, Erasmus, and Luther, or even earlier writers like Tertullian, Augustine, Nicholas of Cusa, and the author of the *Imitatio Christi*. The writings of these men and others had many elements in common with Pico and Agrippa. The distinctive characteristics of Pico's *Examen Vanitatis* – above all the long sections copied directly from Sextus Empiricus and the specific application of these criticisms to Aristotelian philosophy in behalf of Christianity – are missing from all the others. They can be found in Pico's work alone.¹⁶

perimentum sermonum verorum, ut ait Averroes, est ut concordent sensatis. Et illud notius in quod plures sensus conveniunt. Ex sensibilibus itaque eorum scientia manu ducimur ad omnia ea quae a nobis sciri possunt. Iam enim quum sensus omnes saepe fallaces sunt, certe nullam nobis synceram probare possunt experientiam. Praeterea, quum sensus intellectuale naturam nequeant attingere et rerum inferiorum causae ex quibus illarum naturae effectus et proprietates seu passionem demonstrari deberent, sint omnium consensu nostris sensibus penitus ignotae non nec convincitur veritatis via sensibus esse praecclusa? Quare etiam omnes illae deductiones et scientiae, quae in ipsis sensibus radicitus fundatae sunt, omnes incertae erunt et erroneae et fallaces." *De incert.*, 7, p. 27. Cf. note 65 of our chap. III for a similar statement by Pico.

¹⁶ I am pleased to note that Nauert's conclusions on this point (*op. cit.*, pp. 148–52) are largely in agreement with mine.

INDEX OF NAMES

Not included in this Index, generally, are the following: (1) proper names which occur in book titles, (2) the names of translators of modern scholarly works, (3) the printers of Pico's works and bibliographical references to the editions of his works (as mentioned on pp. 203-16), unless they are mentioned elsewhere, and (4) the names of Gianfrancesco Pico and Aristotle, which occur on nearly every page.

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ADDENDA

The following material came to our attention too late to be included in the text of the book.

To note 102, p. 23:

Pico's reputation in Germany is clearly indicated in the letter of Johannes Murmellius to Johannes Bugenhagen of 1512, which reads as follows: "Quod vero certior a me fieri cupis, qui hujus aetatis philosophorum et theologorum quibus anteferendi sint, tametsi id arbitrii nimis quam impudenter mihi arrogem vix illius memor adagii: 'ne ultra crepidas sutor', sententiam meam accipe. Duo hac aetate clarissimi philosophi theologicque et qui proxime ad veteres accedunt meo judicio sunt Joannes Franciscus Picus comes Mirandulanus, qui variae doctrinae multa scripsit opera, inter quae tres hymnos heroicis cum eruditionis reconditissimae commentariis: et Jacobus Faber Stapulensis, qui in Aristotelis plerosque libros, carmina Davidis et Pauli Tarsensis epistolas commentarios scripsit. His addo Carolum Bouillum et Capnionem Phorcensem. Scribendi autem caractere et eloquentia graecorum interpretatione librorum Erasmus Roterodamensis – et hic non contemnendus theologus – cedit nemini." O. Vogt, *Dr. Johannes Bugenhagens Briefwechsel* (Stettin, 1888), p. 6. I am indebted to Professor Eugene F. Rice of Columbia University for supplying me with this reference.

To p. 221:

Manchester (England)

(51A) *John Rylands Library, Ital. 13 (Crawford 13); paper, 16th century, 250 fols. A miscellaneous MS of materials relating to Savonarola. Included are: Pico's life of Savonarola in Italian (fols. 40–124); his *Hymnus de beato Hyeronimo martire*, inc.: Quo te, sancte pater... (fol. 145^v); and his *Opusculum de sententia* (fols. 208–13). Ref.: Moses Tyson, *Hand List of the Collection of French and Italian Manuscripts in the John Rylands Library, 1930* (Manchester, 1930), pp. 41–43 [also in *Bulletin of the John Rylands Library*, XIV (1930)].

To p. 223:

Oxford (England)

(68A) Bodleian Library, Selden Supra 41 (STC 3429); paper, written by

John Bale ca. 1540-1550, 402 fols. A miscellaneous MS relating to the history of the Carmelites. Included are five letters of Battista Spagnuolo Mantovano addressed to Gianfrancesco Pico (fols. 39^r-43^r). Ref.: F. Madan et al., *A Summary Catalogue of Western Manuscripts in the Bodleian Library at Oxford*, vol. II, part I (Oxford, 1922), pp. 630-32.